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Psychological Abstracts

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PSYCHOLOGICAL ABSTRACTS

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GENERAL

279. **Alberini, C.** *Contemporary philosophic tendencies in South America, with special reference to Argentina.* *Monist*, 1927, **37**, 328-336.—South American philosophy is largely a mere reflection of European thought. Successive strata of influence are scholasticism, French philosophy, positivism, particularly in its Haeckelian form, and of late, modern philosophic criticism. Positivism in the form of emphasis on the negative elements of Comte and Spencer (rejecting metaphysics), logical criticism, and over-devotion to technical truth have been the dominant influence.—*C. M. Diserens* (Cincinnati).

280. **Bernstein, N.** *Kymozyklographion, ein neuer Apparat für Bewegungsstudium.* (The kymocyclograph, a new apparatus for motion study.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, **217**, 782-792.—The apparatus described differs from Taylor's chronocyclograph only in that the sensitive film is in motion during exposure, which prevents overlapping and confusion of repeated movements in the print. Its usefulness in the study of normal and pathological movement is pointed out.—*L. T. Spencer* (Yale).

281. **Betz, W.** *Zur Psychologie der Tiere und Menschen.* (On the psychology of animals and men.) Leipzig: Barth, 1927. Pp. xii + 206. Rmk. 9.—This book treats a great number of questions, e.g., sensation, perception, memory, development of the instincts, psychology of thought, intelligence, and still others. The concept of *Einstellung* (in contrast to *Vorstellung*) introduced into the psychology of thought by Betz, in which he sees the real bearer of thought, is now interpreted in the sense of a conditioned reflex. Thus he approaches the viewpoint of the behaviorists, although he has based the *Einstellung* on the method of introspection. He ascribes only a minor rôle to consciousness, and rejects the theory of parallelism.—*W. Betz* (Leipzig).

282. **Carmichael, L.** *Robert Whytt: a contribution to the history of physiological psychology.* *Psychol. Rev.*, 1927, **34**, 287-304.—A biographical sketch of the Scottish physician, with references, is given, followed by a discussion of his contributions to physiological psychology. Whytt experimentally proved the central nervous system to be essential for neuro-muscular response, demonstrated that even a segment of the spinal cord was sufficient for a functional reflex arc, described the pupillary reflex, showed that glandular action might be brought under the general head of reflex response, and contributed to the basic lore of inhibition. He also made observations on the phenomena falling under Weber's law, specific energy of nerves, synesthesia, and functional nervous disease.—*H. Helson* (Kansas).

283. **Dwelshauvers, G.** *Le chronoscope de D'Arsonval en circuit direct avec un nouveau dispositif pour présentations.* (The d'Arsonval chronoscope in direct circuit with a new arrangement for presentations.) *J. de Psychol.*, 1927, **24**, 159-162.—The author notes disadvantages of use of D'Arsonval chronoscope in indirect circuit and describes improved disposition of apparatus and limits of accuracy obtainable.—*C. M. Diserens* (Cincinnati).

284. **Farnsworth, P. R.** *The course in experimental psychology.* *School & Soc.*, 1927, **26**, 524-525.—*H. L. Koch* (Texas).

285. **Farrow, E. P.** *Some notes on behaviorism.* *Amer. J. Psychol.*, 1927, **38**, 660-663.—The dictum of the behaviorist that "thinking is merely talking"

is disproved by the memory of thoughts which occurred in childhood before the use of words were used, and which may be recalled by the analytic process. The ignoring by the behaviorist of the phenomena of consciousness and thought evidences a pathological condition of mind.—*G. J. Rich* (Institute for Juvenile Research).

286. Frank, S. *Contemporary Russian philosophy.* *Monist*, 1927, 37, 1-2.
—The writer classifies and criticizes the more important works in epistemology, ontology, psychology, history of philosophy, philosophy of religion, and social philosophy which have appeared in Russia during the last century. The unfavorable influence of communism is stressed. The motive of Russian philosophy is primarily religious. Russian psychology, in so far as it is original, is a derivation of the non-scientific psychology of literary men, and consists of an attempt to describe psychic life from within in contrast to the procedure of ordinary empirical psychology.—*C. M. Diserens* (Cincinnati).

287. Howard, D. T. *The influence of evolutionary doctrine on psychology.* *Psychol. Rev.*, 1927, 34, 305-312.—All that is essentially new in modern psychology is a result, directly or indirectly, of Darwinian influences. Since mind, before Darwin, did not seem to fit into the mechanical scheme of things as then conceived, a dualism arose between mind and matter in which psychology became the science of mind as a correlative to physics as the science of matter. But dualism is difficult to reconcile with biological naturalism, hence the defection of the behaviorists and the apparent opposition of mental element and organic adjustment in a physical world. The evolutionary point of view ought to be able to avail itself of every good thing in the history of the science. By carrying the evolutionary conception through consistently, by giving a functional definition to content as well as act, the newer psychology finds itself in a position from which it can synthesize and utilize psychological data from all fields, past and present.—*H. Helson* (Kansas).

288. Lindworsky, T. *Experimentelle Psychologie.* (Experimental psychology.) Munich: Kósel, 1927. (4th rev. ed.) Pp. 275.—This work is intended as a textbook for university students. It begins with the elementary processes of mental life and progresses from the simple to the complex experiences. The second book discusses concept renewal as a basis for the higher mental processes. These are differentiated as processes which are conditioned predominantly by the individual mind (e. g., memory, emotion, etc.) and such as are essentially conditioned by society: language, custom, art, religion. The last book discusses the exceptional conditions: sleep, dreams, hypnosis. The author believes the following to be the distinctive characters of his book: Metaphysical and philosophical questions are not considered. The normal phenomena of consciousness (in the adult cultured man) are discussed separately as far as possible. In particular contrast with other compendia, the results of investigations on thought and the will are treated systematically. In this way the rational element of conscious life is more strongly emphasized. The intention to develop a systematic and comprehensive picture gave occasion to close the still empty breaches of empirical study with hypothesis and theory.—*T. Lindworsky* (Köln).

289. Miles, W. R. *The two-story duplicate maze.* *J. Exper. Psychol.*, 1927, 10, 365-377.—Description of an arrangement of two duplicate stylus mazes which permits of having one maze in full view and the other directly below it and screened from view. The lower maze is to be traced while the upper maze is followed visually, a condition of maximal indirect guidance from vision. Results are compared for various degrees of rotation of the lower maze from a position in which it is in register with the upper maze.—*F. A. Pattie* (Harvard).

290. Miles, W. R. *The narrow-path elevated maze for studying rats.* *Proc. Soc. Exper. Biol. & Med.*, 1927, 24, 454-456.—The author describes a side-

less maze similar to Vincent's for use in the study of learning. The maze is composed of units each 30 inches wide with the runway made of material 3/4 of an inch wide. The units may be assembled in a variety of T-shaped patterns. A preliminary report of the general behavior of rats on such a maze is given.—*W. S. Hunter* (Clark).

291. **Newman, H. H. (Ed.)** *The nature of the world and man.* (2d Ed.) Chicago: Univ. Chicago Press, 1927. Pp. xxiv + 562. \$5.00.—Sixteen members of the University of Chicago collaborated in the preparation of this comprehensive account of man and the world in which he lives. In addition to chapters on astronomy, geology, physics, chemistry, botany, and general evolution, discussions are offered of the following topics: the evolution of vertebrates to man (A. S. Romer), the coming of man (Fay-Cooper Cole), human inheritance (E. R. Downing), man from the point of view of his development and structure (G. W. Bartelmez), the dynamics of living processes (A. J. Carlson), and mind in evolution (C. H. Judd). Judd's contribution covers 34 pages and is devoted to a consideration of the following topics: scientific studies of human nature, the nervous system and consciousness, unique characteristics of man, experimental psychology, civilization as a product of intelligence, and the distinctive character of human adaptation. Of the above mentioned contributions, that by Bartelmez is the only one significantly changed in the second edition.—*W. S. Hunter* (Clark).

292. **Phillips, D. E.** *An elementary psychology.* (Revised ed.) Boston: Ginn. Pp. v + 420. \$1.72.—The topics of instinct, habit, emotions, the nervous system, sensation, memory, the power of thinking are handled in the light of mental hygiene, and are supplemented by others treating mental hygiene itself, as well as character, psychology in education, psychology in literature and art, history of psychology, and others not ordinarily found in an elementary text.—*R. G. Sherwood* (Minnesota).

293. **Piéron, H.** *La psychologie comme science du comportement et le behaviorisme.* (Psychology, as a science of behavior, and behaviorism.) *J. de Psychol.*, 1927, 24, 93-98.—Science represents a body of communicable experiences. Its character is social, not individual. A science of consciousness cannot exist. Psychology must be a science of behavior. There is no reason for creating a new terminology, since the existent psychological vocabulary has an essentially objective meaning. Nor is there any reason to reject images or introspection, since these also in essence are simply forms of behavior. Psychology constantly loses scientific value unless translated into behavioristic terms. Behaviorism must be supplemented by the use of the comparative method, but in a final analysis, all psychology, popular or scientific, comparative or solipsistic, in so far as it attains verbal expression must be behavioristic.—*C. M. Diserens* (Cincinnati).

294. **Powicke, F. J.** *The Cambridge platonists.* Cambridge, Mass.: Harvard University Press, 1926. Pp. 219. \$2.50.—The work, concerned with Benjamin Whicheote, John Smith, Ralph Cudworth, Nathaniel Culverwel, Henry More and Peter Sterry, a group which flourished in the middle of the seventeenth century and constituted a "school" for the application of Platonic and Plotinian tradition to the Christian doctrine, is almost wholly theological in scope.—*R. R. Willoughby* (Clark).

295. **Randolph, V.** *The ABC of psychology.* New York: Vanguard, 1927. Pp. 137. \$0.50.—A simplified and necessarily condensed account of the entire field, accompanied by a comprehensive bibliography and review questions.—*R. R. Willoughby* (Clark).

296. **Reiser, O. L.** *Spiritual behaviorism.* *Monist*, 1927, 37, 289-308.—Physical monism and a teleological view of the universe are not incompatible theories if we widen our conceptions of physical processes to include purpose, as

seems possible in the light of electronic behavior and its apparently mnemic aspects. To illustrate this contention the historical development of the concept of energy, its status in modern physics, and its philosophical implications are presented. The universe appears to resolve into determinations of energy, of which consciousness may be a form. Mass and energy being synonymous, the laws of conservation resolve into a general principle of the conservation of world impulse, which in a relativistic scheme is simply a transformation of the principle of least action. Things are stable, statistical constants. Unitary modes of behavior, which we may call continuants, include electrons, atoms, molecules, and perhaps life, mind, and self, since the essence of a continuant is invariance of behavior within range of existence. Thus the way is opened for teleological behaviorism, which is rendered more probable by certain aspects of probability and the presence of integrating factors in evolutional processes.—C. M. Diserens (Cincinnati).

297. Reits, G. V. [August Strindberg's life and work.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 691-710.—Strindberg's life (1849-1912) was a continual conflict with the milieu surrounding him; in no sphere could he adapt himself; he was a typical fighter, a born agitator; probably none of the great authors was so hated as he. His life work consists of 40 dramas, 5 novels, many stories, an extremely interesting series of biographies and some diffuse philosophical works. Strindberg's misogyny, pessimism and attitude toward occultism are more closely examined. In these matters he reacted with characteristic honesty and with his whole temperament against the mighty collective currents prevailing in his time: the fashionable feminism, the shallow optimism and the superficial rationalism. His personality can be compared to a rapid river; he goes from one extreme to another: he is investigator and occultist, socialist and aristocratic superman, passionate and cold. Strindberg's influence is great, especially in Germany, thanks to his tireless translator, Schiering, and to his drama-cycles. It may be presumed that his occult dramas had a great influence upon Georg Kaiser and Rudolf Steiner. Strindberg did not flee from the world, but he felt that it was unfriendly to him; he wished to improve the world around him, but he was not in sympathy with it. His life and work were typical of genius, for genius is predestined to persecution, suffering and unhappiness, since it cannot adapt itself to reality; some spoke even of Strindberg's mental disease, but they could prove only that he had temporary depressions and fleeting hallucinations.—A. L. Shnirman (Leningrad).

298. Rignano, E. The finalism of psychical processes. Its nature and origin. *Monist*, 1927, 37, 321-327.—Recalling a series of finalistic manifestations of life on the purely biological level, including assimilation, metabolism, generation, and regeneration, preestablished and new adaptations, the behavior of lower organisms, and the reflexes and instincts of higher organisms, the author shows that the finalism of mental activities, such as affective tendencies, the unity of consciousness, and the distinctive character of reasoning, is of the same nature. All these manifestations of life and mind have their common source in the mnemic property of living substance in general.—C. M. Diserens (Cincinnati).

299. Rignano, E. The International Congress of Psychologists at Groningen. *Monist*, 1927, 37, 469-486.—Rignano classifies the papers presented at the Eighth International Congress of Psychology and summarizes some of the theoretical ones, adding critical comments from the standpoint of the mnemic psychology. One group of papers dealt with the intensity of sensation. According to Boring, quality is a function of frequency, intensity of the number of fibers stimulated. Rignano accepts the latter proposition, but suggests that quality corresponds to different energetic capacities of the "nervions" of nerve

currents. Vividness depends on the number of nervions or elementary units which pass during a given time in a single fiber, accounting for Kiesow's observation that a single fiber can discern differences in intensity. In response to papers on the *Gestalt* psychology, Rignano says that the theory of affective integration and of affective meanings also affords a method of attaining psychic unity. Studies of eidetic phenomena, said to constitute a definite stage of ontogenesis, failed to stress the affective components. The same is true of the papers in characterology. Several papers dealt with the distinction between understanding and explanation without noting that both are affective classifications. Rignano enumerates the papers on motor phenomena, behaviorism, tests, linguistic psychology, group psychology, and psychology of religion. He notes the absence of guiding principles in much work in applied and experimental psychology and the uniform absence of appreciation of the rôle of affective and mnemic elements. He deplores the iconoclastic attitudes of many modern workers, who even go so far as to reject the facts of psychology in denying finalistic conceptions.—C. M. Diserens (Cincinnati).

300. **Schlegel, F. Von der Seele.** (On the soul.) Augsburg: Filser, 1927. Pp. lxviii + 57.—(Introduction by Günther Müller.) This treatise of the romanticist, written in 1820 and once more made accessible for the first time in a hundred years, offers the experiment of an intuitive Christian psychology as a basis for a Christian philosophy of life and metaphysic. It presents a combination of idealistic, empirical and scholastic motives of thought. Discussions on the faculty of the soul are also given. The introduction indicates Schlegel's place in romanticism and analyzes the essay on the soul in connection with the general development of Schlegel as a typical work of his mature activity.—G. Müller (Freiburg).

301. **Sellars, R. W. Current realism in Great Britain and the United States.** *Monist*, 1927, 37, 503-520.—The first period of the Anglo-American realistic movement is over, and a period of criticism and struggle for survival among the schools is beginning. It is possible to establish the agreements and differences of English realism and American neo- and critical realism and their bearings on psychology and theory of knowledge. In each movement there is a convergence of international and intra-national influences. The characteristic distinction of English realism is that between the mental act of awareness and the object of that act, stressed by Moore. To this Russell adds the influence of American behaviorism and James' doctrine of neutral stuff, neither mind nor matter. Allied is Alexander's doctrine of awareness as non-mental, contentless act, while Broad stresses non-mental sense data. American realists divide on epistemological and psychological lines, the neo-realists developing the view that consciousness is a relation and mind a matter of overt responses or something extra-organic, while critical realism regards consciousness as an intra-organic realm. For the former, knowledge is inspection, for the latter, selection; one tends toward behaviorism, the other toward traditional psychology. Both differ from representative realism in avoiding inference as a means of introducing their extra mental objects, and both have a psychological setting conceiving of mind in terms of response.—C. M. Diserens (Cincinnati).

302. **Torrey, D. C. The normal person.** Jaffrey, N. H.: Normal Person, 1927. Pp. 94. \$1.00.—“Essential psychology is resolved into a practical science for the use of people of ordinary education.”—R. R. Willoughby (Clark).

303. **van Biervliet, J. De la genèse des variétés psychologique.** (The genesis of psychological variations.) *Rev. phil.*, 1927, 52, 161-203.—The author is interested in differential psychology both of individuals and of groups, adults *versus* children, males *versus* females, normal *versus* abnormal. A long list of variants, such as racial history, environment, sensory range, imagery, intelligence and attention are described and categorized in detail. Both introspection and

more objective experimentation are considered necessary methods of investigating individual differences.—*T. M. Abel* (Illinois).

304. von Monakow, C. *Die Syneidesis, das biologische Gewissen.* (Syneidesis, the biological conscience.) *Schweiz. Arch. f. Neurol. & Psychiat.*, 1927, 20, 56-91.—In all living protoplasm there is found a regulative power, syneidesis. It represents not only the interests of the individual, but also those of the coming generation and of society; it acts unconsciously as well as consciously. In the developmental phase of consciousness syneidesis represents human conscience. It consists in a conscious development which is mnemonically attached to biological-physiological processes in the organism. Syneidesis, in its effect on the organism, is dependent on the quality of the inner secretions and the innervation of the cortex. The efficacy of syneidesis may be weakened and rendered questionable by the action of poisons or the incorrect use of the organs. In these cases it can act only implicitly and may in severe cases lead to neuroses and psychoses.—*R. Meili* (Geneva).

305. Weiss, A. P. *The psychological laboratory of Ohio State University.* *J. Exper. Psychol.*, 1927, 10, 434-445.—A detailed description, with floor plans and a photograph of the building.—*F. A. Pattie* (Harvard).

306. Whitehead, A. N. *Symbolism.* New York: Macmillan, 1927. Pp. x + 88.—This book contains the Barbour-Page lectures delivered at the University of Virginia, 1927. Symbolism is defined as follows: "The human mind is functioning symbolically when some components of its experience elicit consciousness, beliefs, emotions, and usages, respecting other components of its experience. The former set of components are the 'symbols,' and the latter set constitute the 'meaning' of the symbols." The author elaborates his topic from the standpoints of epistemology and of social psychology.—*W. S. Hunter* (Clark).

[See also abstracts 382, 452, 470.]

SENSATION AND PERCEPTION

307. Bard, L. *De la transmission par l'influx nerveux des tonalités affectives des sensations.* (Concerning transmission of affective tones of sensation by nervous influx.) *J. de Psychol.*, 1927, 24, 113-133.—The physical mechanism for the transmission of the intellectual elements of sensations consists in an undulatory molecular movement constituting the nerve impulse. These conditions apply also to the transmission of feeling tone, a proposition which the author works out by detailed analysis of the phenomena of affective states. The peculiarities of sensations vary with the physical and chemical properties of stimuli, but whichever of these one considers, its action on the neural mechanisms suffices to condition the appearance of affective tone of either kind. Pleasure depends upon harmony of the physical elements of the corresponding stimuli, the unpleasant upon the excessive intensity or dissonance of these original elements. The conscious or unconscious character of sense receipts does not alter the transmitting mechanism (the nerve impulse), and consciousness seems to be a general property of living beings obscure in animals without a nervous system and developing with the increasing perfection of the latter.—*C. M. Diserens* (Cincinnati).

308. Barden, H. P. *Über die Schätzung von Winkeln bei Knaben und Mädchen verschiedener Altersstufen.* (On the estimation of angles by boys and girls of different ages.) *Arch. f. d. ges. Psychol.*, 1927, 58, 81-94.—Between the ages of 14 and 18 precision in the estimation of angles by eye increases with age. Boys estimate angles more accurately than girls. Angles less than about 80° are overestimated, larger angles are underestimated. An angle is most accurately estimated if one side is horizontal.—*D. McL. Purdy* (California).

309. Bourdon, B. Illusions provoquées par une diplopie. (Illusions provoked by diplopia.) *J. de Psychol.*, 1927, **24**, 78-79.—A mild case of diplopia in the author results in cinematoscopic illusions and illusions of magnitude. The former illustrate production of movement from immobile impressions, the latter the influence of apparent distance on apparent magnitude. The influence of the direction of attention on localization is illustrated by experiments showing that visual localization depends on direction of attention.—C. M. Diserens (Cincinnati).

310. Carr, H. An interpretation of the Weber-Fechner law. *Psychol. Rev.*, 1927, **34**, 313-319.—The inequality of cause (stimulus) and effect (sensory process) expressed by the Weber-Fechner law is not peculiar to the sensory domain, but is also found in many cause and effect relations. This feature of the psycho-physical relation can best be explained in terms of increasing resistance and consequent dissipation of energy into other channels. The second feature of the relationship, *viz.*, the fact that minimal increments of stimulus do not produce any *apparent* sensory effect, requires another explanation, which also applies to phenomena outside the sensory domain: Because of the non-equivalence of units of measurement when the cause and effect relations involve a transformation of energy, we may sometimes find that many increments of cause produce no measurable effect, while it may also happen that measurable variations in effect do not disclose corresponding fluctuations in the causal conditions which can be detected. Psychologically, the second theory is similar to Wundt's. Every increment of stimulus does produce a sensory effect, but this effect cannot always be apperceived or cognitively identified.—H. Helson (Kansas).

311. Kucharski, P. Le rôle du temps dans l'excitation auditive. (The rôle of time in auditory stimulation.) *J. de Psychol.*, 1927, **24**, 83-85.—As a result of experimental studies of chronaxy, it appears that reaction times for a given intensity of auditory stimulation decrease as the frequency of the sounds increase. The chronological aspect of auditory functioning is of great importance for a knowledge of the mechanism of audition.—C. M. Diserens (Cincinnati).

312. Magne, H., Mayer, A., & Plantefol, L. Une sensibilité spéciale des premières voies respiratoires—la sensibilité drimyosmotique. (A special sensitivity of the primary respiratory tracts—drimyosmotic sensitivity.) *J. de Psychol.*, 1927, **24**, 255-279.—A historical summary of the problem is followed by a discussion of reflexes provoked by irritation of the respiratory passages, with an illustrated account of apparatus employed in experiments. A study of the relation between molecular configuration of substances and respiratory irritability which they produce is suggested. Important conclusions are: (1) Irritating bodies are not to be confused with odorous ones. (2) There is a threshold of irritation depending on concentration; this varies from individual to individual. (3) The differential sensitivity is about 1/10 in the vicinity of the absolute threshold. (4) Irritation of the respiratory tracts appears to conform to Weber's law. (5) Different species of animals show very unequal respiratory sensitivity, the most sensitive being the hare. (6) Sensitivity is less acute in the deeper respiratory tracts. (7) The trigeminal is a sensory nerve the sensitivity of which may be called drimyosmotic. (8) Irritant power is a function of the molecular constitution of the stimulus.—C. M. Diserens (Cincinnati).

313. Mitra, S. A report on some experiments on the indirect perception of forms. *Indian J. Psychol.*, 1927, **2**, 15-22.—The importance of indirect vision for daily life and safety, for example, in crossing a busy thoroughfare, can hardly be exaggerated. These experiments were performed at Calcutta University, with advanced students and research scholars serving as subjects. Straight lines in the indirect field of vision were never misjudged by any of the subjects, either monocularly or binocularly. Curved lines, however, appeared sometimes straight

and sometimes curved, depending upon their size and location. Quantitative tables are presented to indicate the exact results achieved by each subject.—*L. A. Averill* (Worcester Normal).

314. **Poljak, S.** Über den allgemeinen Bauplan des Gehörsystems und über seine Bedeutung für die Physiologie, für die Klinik und für die Psychologie. (On the general structural plan of the auditory system and its significance for physiology, for the clinic and for psychology.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1927, 110, 1-49.—Along with a detailed evaluation of the extensive literature, some histological studies are contributed on the labyrinth and the auditory nerve paths of bats, mice, rats, cats and human fetuses less than 7 months old. Staining was usually done with silver following Golgi, but also following Nissl, Weigl and Cajal-Castro. The hypothesis that the isolated conduction of the impulse of the single basilar membrane fibers serves as a basis for the ability of higher tone analysis in mixed clangs appears, according to this investigation, to have a sound histological basis. The bundles of fibers of the cochlear nerve arising from the different sections of the respective fibers of the spiral ganglia do not mingle with each other, but reach the primary bulbar auditory centers in entirely fixed sections. The arrangement of the fibrous and cellular elements of these centers is not without plan, but spatially has a rigidly determined layer formation. The other ganglion masses intercalated in the central cochlear paths likewise show a more or less well marked stratification. The lateral lemniscus is also made up of bundles of fibers which are arranged in parallel formation.—*W. Wirth* (Leipzig).

315. **Schubert, G.** Über das motorische Verhalten des Auges bei binocularem und unocularem Sehen. (On the motor behavior of the eye in binocular and unocular vision.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, 217, 756-781.—The variations of the eye in fixation are described both for binocular and unocular vision. The behavior differs for the two types of vision. In a blinded position, i.e., the position assumed by the eye under symmetrical intense illumination after interruption of the image, movements occur independent of pulse and breathing and differentiated from the fixation movements by various characteristics. No definite explanation can be given for these movements. Individual differences are found in the time required for the change from a blinded to the fixation position. The speed of the reverse change is inversely proportional to the duration of the preceding fixation. Movements also occur in the transition from unocular to binocular vision but are subject to reduction after training.—*L. T. Spencer* (Yale).

316. **Sengupta, N. N., & Bose, S. K.** Monocular perception of distance. *Indian J. Psychol.*, 1927, 2, 23-28.—The experiments here reported were designed to measure the amount of error in the perception of distance as seen by one eye. The threshold value of distance when seen monocularly was found to be from five to eight times as large as when seen binocularly, or in other words, taking normal binocular vision as the standard the error in monocular perception is from five to eight times the value. The threshold values obtained by Wundt were, according to the present experiments, too large.—*L. A. Averill* (Worcester Normal).

[See also abstracts 335, 349, 354, 412, 497.]

FEELING AND EMOTION

317. **Apfelbach, H.** Affektdynamik, Studien zu einer Psychologie der normalen und anomalen Gemütsbewegungen des Menschen. (Emotional dynamics; studies on a psychology of the normal and anomalous emotions of man.) Vienna: Wilhelm Braumüller, 1927. Pp. 204.—This book studies the inner

processes which bring about our emotions and determine the emotional life and the disposition. A genealogy of the emotional life from infancy to senility gives an opportunity to explain and discuss in the light of affective psychology the resulting classifications of emotion and the newer orientations in the progress of mental life. Freudian psychoanalysis is sharply criticized.—*H. Apfelbach.*

[See also abstract 338.]

ATTENTION, MEMORY AND THOUGHT

318. Galli, A. *Ricerche sui rapporti esistenti tra la complessità dei fenomeni associati e la forza della associazioni.* (Investigations into the relations between the complexity of associated phenomena and the strength of the associations.) *Pubbl. Univ. Cattol. Sacro Cuore, Milano*, (Serie I), 1925, 1, 113-164. —The author made a study of the "associative affinity" of figures and colors by experimenting on five subjects with 144 cards bearing strange figures, some colored and some black, which were denoted by names. The results show the superiority of colored over black figures, of complex over simple figures, and of form over color in producing correct responses. The preferred factors, however, lose when combined with the non-preferred. The percentage of correct responses increases rapidly in the beginning, then slowly, and at the end shows irregularity. The highest results are obtained with the series of composite colored figures, and the greatest difference between the various series is found in the middle of the experiments. After an interval the relation between the various categories of tests remains the same for each subject; and the weaker the results of the first memorizing the greater the gain during the delayed memorizing, owing to the influence of practice.—*R. Schwarz* (George Washington University).

319. Good, C. V. *The effect of extensive and intensive reading on the reproduction of ideas or thought units.* *J. Educ. Psychol.*, 1927, 18, 477-485. —Experiments are conducted upon parallel groups to determine the relative efficiency of studying a small amount of material intensively on the one hand and of a wide reading in several texts on the other. One of the topics was "generalized experience." The intensive group read forty-four pages in the text; the extensive group read this same material plus 160 pages on the same topic from such texts as Thorndike, Colvin, Inglis, and Starch. The subjects were university students. The results indicated that for purposes of reproducing accurately the ideas considered, the intensive study of a small number of pages was as efficient as the extensive method.—*A. M. Jordan* (North Carolina).

320. Guilford, J. P. *The rôle of form in learning.* *J. Exper. Psychol.*, 1927, 10, 415-423. —Experiments on the learning of lists of numbers arranged according to some numerical progression and of lists without any such form. When the subjects grasped the form, the learning was greatly facilitated. Failure of a form to emerge when one of a certain kind was expected interfered with learning. The form does not emerge from the piecing together by association of discrete elements and relations, but the elements become merely the necessary members of the complete form and are remembered as such.—*F. A. Pattie* (Harvard).

321. Heidbreder, E. F. *Reasons used in solving problems.* *J. Exper. Psychol.*, 1927, 10, 397-414. —Groups of ten subjects each (one of adults, one of three-year-old children, one of four-year-old subjects, and one of children from six to ten years) were confronted with simple problems. For subjects under five years the task was to discover in which of two boxes a doll was concealed; for the older subjects the doll was omitted and the instructions and procedure more formal. The clue to the correct choice was in some problems the position of the box, in others the design on the cover. After the first reaction the subject

was asked a reason for his choice. The older subjects accompanied their reactions with reasons far oftener than the three- or four-year-old groups. Subjects under five never gave more than one reason for a single reaction, as the older ones did. The reasons when classified into eleven kinds and distributed according to age-groups could be arranged in a series beginning with reasons used only by children under five, ending with those used only by adults, and containing between these extremes classes representing a gradation from less mature to more mature responses.—*F. A. Pattie* (Harvard).

322. **Jersild, A. T.** *Mental set and shift.* *Arch. Psychol.*, 1927, **14**, No. 89. Pp. 81.—Mental set and shift were considered as related to the type of work, to practice, and to intelligence. The material used was Woodworth-Wells blanks. Adding and multiplying situations were presented, as well as form-naming, substitution, cancellation, etc. The subjects were school children and college students. Among the conclusions are the following: The more highly one has become adapted to shift from one element to the next in a uniform activity, the greater will be the loss when shift between elements of this activity and another activity is required. When two or more activities, each of which by itself operates with a distinct mental set, are combined into one performance, the alternation from one activity to another does not call into play a special shift factor. A more comprehensive mental set is formed and the shift effects within this mental set differ from the adjustments required in the separate activities in degree rather than in kind. The more integrated the successive responses in the separate activities have become through practice, the greater will be the retardation effected by shift from one activity to another. The type of ability that makes for high performance in standard intelligence tests also makes for high ability in shifting. A bibliography is appended.—*E. M. Achilles* (Columbia).

323. **Lund, F. H.** *The rôle of practice in speed of association.* *J. Exper. Psychol.*, 1927, **10**, 424-434.—Experiments were made to determine the effect of practice in the Woodworth-Wells color-naming test. The greater difficulty of color-naming as compared with reading the names ("word-naming") cannot be referred to obstructive tendencies (difficulties of articulation, etc.) in the motor adjustments of speech, since word-naming, which causes the same speech-reactions, requires only about two-thirds of the time taken in color-naming. Neither can it be due to a greater discriminability of the words as compared to the colors, for finding of colors on a page takes almost twice as long as finding the color-names. The difference must lie in the greater practice which adults have had in associating a verbal response with a written word rather than with an actual stimulus. Children before the reading age did better in color-naming than in word-naming, even after a number of preliminary trials to insure their knowing the words. One child of five years was given 130 trials in color-naming alternating with 130 trials in word-naming over a four-week period. Performance in the two tests tended to approach the same level as the practice was continued.—*F. A. Pattie* (Harvard).

324. **Usnadze, D.** *Zum Problem der Bedeutungserfassung. (Inhalt und Gegenstandsbedeutung.)* (On the problem of the apprehension of meaning: content and object-meaning.) *Arch. f. d. ges. Psychol.*, 1927, **58**, 163-186.—Through what psychological processes do objects acquire meaning? In particular, is meaning based on sensory content? To solve these problems, observers were confronted with various objects which they were asked to identify by the sense of touch, the eyes being closed. In these abnormal circumstances the ordinary short-circuit processes of consciousness are in abeyance, and the conditions underlying the genesis of meaning should be brought into the light. Both introspections and behavior were noted. Occasionally the object was withdrawn before the identification was completed, and immediate introspections required. The author concludes that three independent experiences are involved: (1)

sensory contents, (2) form-qualities, and (3) a unique "disposition," "conscious attitude," or "meaning-awareness" appropriate to the particular object. To no single one of these can the concrete meaning of the object be attributed; it attaches rather to the specific totality. "Meaning-awareness" (*Bedeutungsbewusstheit*), however, is the directing agency in the formation of this whole. Not merely is meaning not built up of sensory contents, but sensory contents and form-qualities are themselves transformed in the process of development of object-meaning. "Meaning-awareness," which belongs to the "subpsychical sphere," is the fundamental factor in this process.—*D. McL. Purdy* (California).

[See also abstracts 491, 496.]

NERVOUS SYSTEM

325. Bast, T. H., & Bloemendaal, W. B. **The effect of experimental exhaustion due to lack of sleep on nerve cells in the medulla.** *Amer. J. Physiol.*, 1927, 82, 140-146.—Histological examination of the medulla of animals exhausted by lack of sleep reveals chromatolysis of certain cells, mainly in the reticular formation, the commissural nucleus of the solitarius and the dorsal nucleus of the vagus. The Nissl bodies lack the characteristic definite outlines and appear fragmentary or granular. Vacuoles appear in the cytoplasm. The nucleolus is normal. The nucleus stains less deeply and the substance which does stain is clustered around the nucleolus. There is no apparent migration of the nucleus.—*M. J. Zigler* (Wellesley).

326. Bast, T. H., Schacht, F., & Vanderkamp, H. **The effect of experimental exhaustion due to lack of sleep on the nerve cells of the spinal cord.** *Amer. J. Physiol.*, 1927, 82, 131-139.—Exhaustion due to lack of sleep produces two types of histological change in the spinal cord. There is (1) reduction of the chromatin material of the nuclei, and (2) chromatolysis characterized by granular Nissl bodies or diffuse granulation throughout the cytoplasm and by presence of vacuoles in the cytoplasm.—*M. J. Zigler* (Wellesley).

327. Belloni, G. **Contribution à l'histo-pathologie de la névroglié.** (Contribution to the histopathology of the neuroglia.) *Riv. pat. nerv. e ment.*, 1927, 32, No. 3.—The author studied especially the neuroglial autolysis in the acute confusional syndromes and reports the results of his researches on the nervous systems of five individuals who died following such syndromes. Belloni employed the methods of Cajal and del Rio Hortega. The conclusions are: (1) In the case of mental syndromes or where death was preceded by a confusional state with or without hyperthermia, histological examination reveals a regressive alteration of the neuroglial plexus and of the cells of the glia extending throughout the entire cerebrospinal axis. (2) This alteration in the character of the autolytic processes appears to be more acute in the protoplasmic glia than in that which is fibrous. (3) The astrocytes exhibit amoeboid forms more often than do the protoplasmic cells. (4) The small cells of the glia which are rendered fibrous by the chronically diseased stimulation resist the autolytic process to a remarkable degree.—*G. Corberi* (Milan).

328. Beritoff, J. **Über die individuell-erworbenen Tätigkeit des Zentralnervensystems.** (On the individually acquired activity of the central nervous system.) *J. f. Psychol. u. Neur.*, 1927, 33, 113-335.—Investigations of acquired activities of the nervous system have heretofore had two directions. In the Russian reflexology the nervous changes and principles involved are considered and explanatory hypotheses are offered. These hypotheses were first presented when our knowledge of the action of the nervous system was much less complete than at present. No significant changes have been made in the Russian concepts since that time, so that the present theories are generally out of harmony with

modern knowledge of nervous activity. Among American behaviorists, on the other hand—of whom Watson is taken as representative—the interest of the investigator is restricted to establishing the laws and principles of the relation between various situations and their behavior consequences. Speculation as to the neural events involved is regarded as either inappropriate or futile. Both these attitudes are unjustified in the light of the rich knowledge at present at hand in regard to the principles of nervous activity. In order to prove this, explanations in terms of modern physiological concepts are offered for the various experimental findings of the reflexologists. Since the literature of these researches is largely inaccessible to western readers, Beritoff proceeds to describe in detail experiments by himself and others, confirming each of the principal findings of the reflexologists. These include the definition of the conditions under which conditioned reflexes are acquired, the occurrence of generalization and differentiation of such reflexes, the distinction of various types of reflexes; and the modification of conditioned reflexes (including obliteration, reinstatement, interference by irrelevant stimuli or by stimuli recently rendered indifferent, and complication with other conditioned reflexes). The views of Pavlov and Bekhterev as to the development and modification of the reflexes are presented, including the mechanism of the analyzers, the principle of temporary connection, the law of irradiation and concentration of excitation, the concepts of outer and inner inhibition, and of successive induction. Ukhtomski's principle of the dominant is discussed. Numerous experimental results, upon which these various concepts were based, are cited. Beritoff's own "law of the colligated irradiation of excitation" is stated, viz., "the excitation irradiates from each cerebral locality over the whole cortex, but the intensity of excitation in each nerve path depends, not alone on its degree of excitability, but also on the degree of excitability of all other paths leading from the same locality; the more strongly the excitation irradiates to the most excitable paths the more weakly it irradiates to the other less excitable paths." The experimental evidence supporting this generalization is cited and an attempt is made to indicate the applicability of the law to the central action of the spinal cord. The analogy of the occurrences assumed in Beritoff's hypothesis to the division of current in a system of parallel conductors of different resistance values leads to an explanation in terms of the distribution of the action current in the nerve network. Since the nerve circuits are not mere single neurones the all or nothing law is not involved. The differential character of the irradiation is assumed to be conditioned by the physico-chemical changes occurring in the neural circuits. Practice can effect such changes perhaps by an actual morphological alteration in the number of neurofibrils and even of the nerve cells themselves. The permeability of nerve plasm membranes is also supposed to increase with repeated activity of a nerve path. Ariens Kappers has reported a neurobiotaxis resulting from successive excitation of a given nerve path. However, in the most fully developed paths such action current determination may not apply. Not only are the various phenomena of conditioned reflexes explicable in accordance with Beritoff's law, but the facts reported by Minkovski with regard to reflex development in the fetus are such as by the law one would expect for the known stages of morphological development. Certain temporal connections involved in acquired reflexes are discussed and found to conform to the Beritoff principle. An interesting section here is devoted to the effects of conditioned stimuli during sleep. An analytic attempt to localize the cerebral portions of the nervous arcs involved in conditioned reflexes is developed. The phenomena and methods of obliterating and reviving reflexes—both acquired and inherited—are treated in two succeeding sections. The effects of irrelevant stimuli are reported and explained. The relations of acquired reflexes to other reflexes—acquired or inherited—are taken up and accounted for. The effects of various physiological conditions upon the condi-

tioned reflex are also reviewed. Bromonatrium, caffein, alcohol, and strychnine all have definite effects which coincide with expectations from the colligated irradiation principle. Hunger speeds up the formation of conditioned reflexes but weakens the differentiation process. During the extreme hunger of the Russian famine of 1920-1921, however, conditioned salivary reflexes in the dog were slow to form. Old age renders the conditioned reflex unstable. Conditioned salivary reflexes in the dog disappear while inherited salivary reflexes remain, but these also disappear 3 days before death from old age. Such morphological changes in the cerebrum as are reported in old age support the physiological assumptions of Beritoff's hypothesis. Slight exertion, which apparently increases the excitability of the nervous system, produces acceleration of the conditioning process and increases generalization, but decreases differentiation. Greater exertion—reducing the excitability—has the opposite effects. A bibliography of 284 titles, many of them rarely encountered by the American reader, is included.

—L. T. Spencer (Yale).

329. Bohnenkamp, H., & Friedman, L. **Weitere Untersuchungen über die Herznerven. II. Die Herznerven und der Sauerstoffverbrauch des Herzens.** (Further investigations on the heart nerves. II. The heart nerves and the oxygen consumption of the heart.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, **217**, 664-676.—By three different techniques it is shown that vagus influence decreases oxygen consumption of the heart while stimulation of the accelerans increases it. Gaskell's theory of an anabolic effect of the vagus is thus not supported.—L. T. Spencer (Yale).

330. Clivio, C. **Observations sur l'existence de neurofibrilles.** (Observations on the existence of neurofibrillae.) *Riv. pat. nerv. e ment.*, 1927, **32**, No. 3.—By specially designed methods Clivio has shown the possibility of staining in a piece of cortical material first the Nissl granules, then the fibrillae, and finally the Nissl granules again. This proves that the fibrillae are not a product of disintegration of the tigroid substance, but that they exist independently.—G. Corberi (Milan).

331. Curschmann, H. **Clinical neurology for practitioners of medicine and medical students.** (Tr. by Strecker, E. A., & Meyers, M. K.) Philadelphia: Blakiston, 1927. Pp. ix + 410.—Based largely upon the classical work of Curschmann, this book presents the main features of symptomatology, treatment and prognosis of a wide range of nervous disorders. The subject-matter is essentially clinical and descriptive, as determined by practical considerations.—F. L. Wells (Boston Psychopathic Hospital).

332. Keiller, W. **Nerve tracts of the brain and cord.** New York: Macmillan, 1927. Pp. 456. \$8.00.—A textbook embodying the teaching experience of twenty years. The three parts treat the anatomy of the nerve tracts, the anatomy and physiology of the nerve tracts, and applied neurology. The illustrations are grouped toward the end of the volume, becoming profuse in the last part, where most of the more frequently met syndromes are illustrated, with brain and cord schemata of the lesions involved. A "long diagram" appears at p. 436, giving detailed serial sections of the entire C. N. S. No collected bibliography is given, but there are extensive references in the text. Numerous diagnostic tables, etc., appear in Part 3.—R. R. Willoughby (Clark).

333. Lawrentjew, B. I. **Die Faserendigung des N. vagus im Säugetierherzen.** (The fiber ending of the vagus nerve in the mammal heart.) *Anat. Anz.*, 1927, **64**, 59-62.—A preliminary report of morphological work done by the degeneration method. The physiological suppositions that (1) the sensitive apparatus of the endocardium belongs to the system of the vagus nerve, and (2) the vagus fibers are interrupted in the intramural ganglia of the mammal heart are proven morphologically sound.—J. F. Brown (Yale).

334. Ranson, S. W. **The anatomy of the nervous system.** (3d Ed., re-

vised.) Philadelphia: Saunders, 1927. Pp. 425. \$6.50.—This edition, published four years after the 2d edition, contains some new material on the geniculocalcarine fasciculus, mieroglia, and oligodendroglia as well as certain new illustrations. The "anatomy of the nervous system has been presented," in this textbook, "from the dynamic rather than the static point of view." "The student is led at the very beginning of his neurologic studies to think of the nervous system in its relation to the rest of the living organism."—W. S. Hunter (Clark).

335. Steinhausen, W. Über Sichtbarmachung und Funktionsprüfung der Cupula terminalis in den Bogengangampullen des Labyrinthes. (On making visible and studying the function of the cupula terminalis in the ampullae of the semicircular canals of the labyrinth.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, 217, 747-755.—A new method of direct observation of the physical occurrences in the ampullae is described. Currents in the endolymph appear to cause actual movement of the cupula.—L. T. Spencer (Yale).

336. Velluda, C. C. Beiträge zum Studium des Metopismus. (Contributions to the study of metopism.) *Anat. Anz.*, 1927, 64, 51-59.—J. F. Brown (Yale).

[See also abstracts 307, 348, 350, 409, 431.]

MOTOR PHENOMENA AND ACTION

337. Bahrs, A. M. Notes on the reflexes of puppies in the first six weeks after birth. *Amer. J. Physiol.*, 1927, 82, 51-55.—Description of certain reflexes of posture and reactions to rotation which are manifested only in the first weeks of post-natal life.—M. J. Zigler (Wellesley).

338. Darrow, C. W. Sensory, secretory, and electrical changes in the skin following bodily excitation. *J. Exper. Psychol.*, 1927, 10, 197-226.—Changes in the amount of insensible perspiration secreted by the skin were recorded while the galvanic skin reflex was registered from approximately the same region of the skin. The apparatus, which was highly sensitive to moisture changes, consisted of a zinc electrode with an opening in the center, over which was stretched a band of silk fibers coated with a deliquescent salt. Electrical connections were made between the electrode and the ends of the fibers. An increase in the moisture of a current of dry air passed over the skin under the electrode decreased the electrical resistance of the fibers, and the change in conductivity was registered by a galvanometer. For the galvanic skin reflex no external current was used. In order to determine changes of both potential and resistance of the skin a known E. M. F. was introduced into the circuit at intervals of $1\frac{1}{2}$ sec. A positive correlation exists between the curves representing the secretory and the electrical phenomena; an increase in amplitude or duration of moisture change is correlated with an increase in amplitude and duration of both the ascending and descending parts of the skin reflex curve. The galvanic skin reflex is a function of relatively independent E. M. F. and resistance changes. The decrease in bodily resistance is a function of the breakdown of semi-permeable membranes; it is not due merely to the presence of conductive moisture on the skin. Sensory phenomena (tingling, warmth, etc.) were reported, and their duration was positively correlated with the amplitude and duration of the skin reflex and moisture curves and with the amount of changes of bodily E. M. F. and resistance.—F. A. Pattie (Harvard).

339. Dodge, R., & Bott, E. A. Antagonistic muscle action in flexion and extension. *Psychol. Rev.*, 1927, 34, 241-272.—The main question investigated in this study concerned the action of antagonistic muscles during the voluntary extension and flexion of a limb. Authors sought to record the gross time relations of the correlated thickening and thinning of antagonistic muscles or muscle

groups. Records were obtained from four sets of muscles, flexors and extensors of the digits, the biceps and triceps brachii, the tibialis and gastrocnemius, and the quadriceps and ham-string muscles. Some evidence is stated in favor of the hypothesis of dual origin of muscle contraction on the basis of a study of: the effect on the relevant muscles of slow passive oscillation; evidence for co-contraction of relaxed antagonistic muscles at the beginning of voluntary oscillation of a mobile member; the conditions of the relaxation of antagonists and the origin of stable patterns of reciprocal contraction and relaxation in voluntary oscillation of a mobile member. Implications of the data for the refractory phase hypothesis are pointed out which lead to a restatement of the original experimental problem with which this paper is concerned. Figures illustrate the various phases of muscular activity discussed by the writers.—*H. Helson* (Kansas).

340. Durrant, E. P. **Relation of hysterectomy to voluntary activity in the white rat.** *Amer. J. Physiol.*, 1927, **82**, 14-18.—Hysterectomy produces only temporary disappearance of the oestrous cycle and temporary reduction in activity. Since there is complete restoration of the normal status in respect of both functions on an average of 23 days after the operation, it is concluded that both effects are the result of the operation *per se*, and that the uterus has no hormonal effect on the cyclic activity of the ovary.—*M. J. Zigler* (Wellesley).

341. Gans, H. M., & Miley, H. H. **Ergographic studies on adrenalectomized animals.** *Amer. J. Physiol.*, 1927, **82**, 1-6.—Comparative study of the ergographic records of the gastrocnemius muscles of adrenalectomized and normal rats shows that the former produce only 1/16 the total work of the latter.—*M. J. Zigler* (Wellesley).

342. Groebbel, F. **Die Lage- und Bewegungsreflexe der Vögel. V. Die physiologische Gruppierung der Lage- und Bewegungsreflexe der Haustaube und ihre weitere Analyse durch Labyrinthentfernung und galvanische Reizung nach Entfernung des Labyrinths und seiner Teile.** (The position and movement reflexes of birds. V. The physiological grouping of the position and movement reflexes of the domestic pigeon and their further analysis by removal of the labyrinth and galvanic stimulation after removal of the labyrinth and its parts.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, **217**, 631-654.—A physiological grouping of the reflexes in question is given. Comparison is made with parallels in the action of the fore and hind legs of quadrupeds. A central antagonism is reported between impulses from the ampullae and those from the otolithic receptors. Consideration is made of central connections with the various peripheral structures of the labyrinth.—*L. T. Spencer* (Yale).

343. Hill, A. V. **Muscular movement in man: the factors governing speed and recovery from fatigue.** New York: McGraw-Hill, 1927. Pp. 104.—The Foulerton Research Professor of the Royal Society of London gives a technical presentation, in chemical and mathematical terms, of experiments bearing upon work, fatigue, viscosity of muscle, the dynamics of sprint-running, and the efficiency of muscle. Athletes were used in many of the experiments because these individuals are in an excellent state of health and can repeat their performances exactly again and again. Furthermore the "processes of athletics are simple and measurable and carried out to a constant degree, namely to the utmost of a man's powers." In the studies of oxygen consumption, the expired air was collected in a suitable container, which in some cases was carried by the subject, and then analyzed. The author says, "Personally I should feel inclined to mistrust the observations of anyone who does not, at least once a day, analyze pure atmospheric air and get the theoretical value of 20.93% for the oxygen." "During continuous work at a constant speed, the processes of the body work up gradually from the low level characteristic of rest to the high level characteristic of the exercise." The oxygen consumption lags behind this rise as it does behind the later recovery from work. The relation between energy requirements and

speed of work is discussed, and the significance for industry indicated. The rapid onset of fatigue in sprint-running is due to a diminished speed of muscular contraction and relaxation and to an increase in viscosity rather than to fatigue of the central nervous system. Individual differences in viscosity between athletes is an important factor in the records which they can make.—*W. S. Hunter* (Clark).

344. **Hill, A. V.** *Living machinery*. New York: Harcourt, Brace, 1927. Pp. xxi + 306. \$3.00.—Eight lectures delivered at the Lowell Institute, Boston, March, 1927, covering the following topics: nerves and the messages they carry; muscles and how they move; the heart and some other muscles; the lungs and blood; nerves and muscles working together; speed, strength, and endurance; physiology as a meeting ground of the sciences; and mechanism and purpose. The author gives a general survey of the fields indicated by the above topics, with particular emphasis upon his own studies on work, fatigue, and oxygen consumption with human subjects. Many of these experiments have been made upon athletes (see Abstract 343) and reveal methods of grading skill quantitatively in terms of oxygen consumption.—*W. S. Hunter* (Clark).

345. **Manoiloff, E. O.** *Discernment of human races by blood, particularly of Russians from Jews*. *Amer. J. Phys. Anthropol.*, 1927, 10, 11–21.—Blood tests of 880 Jews and 1120 Russians, by author's new method, have led to the following results: The determination of different races by blood with author's reagents—in this case to distinguish Jewish blood from Russian—gave the correct result in 91.7% of the cases tested. The oxidizing process was produced in Jewish blood more quickly than in Russian. The reaction may be of value in medico-legal investigations. In mixed marriages the reaction gives indications of the influence exercised on one race by another.—*E. O. Manoiloff* (Leningrad). (Courtesy of the Wistar Bibliographic Service.)

346. **Miley, H. H.** *The effects of ovarian extirpation on fatigability of muscle in the rat*. *Amer. J. Physiol.*, 1927, 82, 7–13.—Hoskins, Wang, and Durrant have shown that removal of gonads or ovaries in rats reduces the amount of voluntary activity of the animals. Gans and Hoskins found that the total work performed, as indicated by ergographic records, is less in castrated rats than in normal males. The present study makes a similar comparison, with substantially similar results, of the ergographic records of the gastrocnemius muscles of spayed and normal female rats.—*M. J. Zigler* (Wellesley).

347. **Oparina, N. V.** [An experiment in training an association-reflex in a school children's collective.] *Novoe v refleksologii i fiziologii nervnoi sistemy* (Reflexological and neurophysiological news), 1926, 2, 248–255.—This is a study of the speed of formation of an association-reflex in a group as a definite collective personality, as compared with the speed in a single individual. Two types of groups were found, the association-excitatory and the association-inhibitory, the two being sharply distinguished both by the rapidity of formation of the association-reflex and by the reciprocal relation between the members of the group. In the group of the association-excitatory type, the association-reflex was formed quickly and persisted for a long time. The relation between the members of the group, in this type, is such that it exerts an accelerating effect upon the formation of the association-reflex. The group of the association-inhibitory type is characterized by the slowness of formation of the association-reflex (number of repetitions 150, 210, etc.); in some groups no association-reflex was obtained even after 630 repetitions. This slowness was due to members who were of the association-inhibiting type, who in every way exerted an inhibitory influence upon the others. The rôle of the leader of the group was exhibited clearly, all the other members subjecting themselves to him.—*A. L. Shnirman* (Leningrad).

348. **Patrizi, M. L.** *Intorno al sospetto "ormone vagale" di Loevi*. (The hypothetical "vagal hormone" of Loevi.) *Boll. soc. med. di Bologna*, 1927, 5,

Serie 10.—Loevi, of Graz, maintains that during the excitation of the tenth pair of cranial nerves there is formed in the muscular mass of the heart a peculiar substance, which under certain experimental conditions (the heart being kept in Ringer's solution) passes in the same blood which is contained in the heart. Patrizi, who studied this question at length, has performed many experiments upon the connected hearts of two large dogs. Under his conditions he has observed plainly the passage from one heart to the other of well defined substances (adrenalin, acetylcholin, neurin, etc.); nevertheless, during the stimulation of the vagus nerve he observed no phenomenon in the animal which was not stimulated. It seems, therefore, that the hypothetical substance of Loevi is not carried by way of the normal circulation. The work is illustrated by numerous graphs.—*G. Corberi* (Milan).

349. Pearcy, J. F., & Allen, T. D. **Reflexes from the gastro-intestinal tract to the eye.** *Amer. J. Physiol.*, 1927, **82**, 56–58.—“Distension of the stomach or intestines in man produces a reflex disturbance in vision. Objects blur, especially near objects. . . . The blurring is not due to ametropia, heterophoria, or change in intra-ocular pressure. It is due to (a) ciliary muscle hypotonia . . . and (b) retinal congestion and edema. The subjective changes (wandering of the attention) are part of the general nervous reaction to the distension. These nervous reactions are similar to those produced by eating a large meal.”—*M. J. Zigler* (Wellesley).

350. Pearcy, J. F., & Weaver, M. M. **A study of the bulbo-spinal reflexes in dogs and cats under barbital anesthesia.** *Amer. J. Physiol.*, 1927, **82**, 47–50.—Barbital, given in quantities adequate for surgical anesthesia, produces very slight, if any, depression of bulbo-spinal reflexes. An animal properly anesthetized by barbital is equal and in certain respects superior to the decerebrate animal for the study of bulbo-spinal reflexes. The onset of spinal shock after spinal transection is delayed in the barbitalized animal.—*M. J. Zigler* (Wellesley).

351. Peczenik, O. **Über den Einfluss der Nahrung auf Aktivität und Ruhe.** (On the influence of the diet on activity and rest.) *Pflüg. Arch. f. d. ges. Physiol.*, 1927, **217**, 696–698.—A meat diet, rich in albumen, increases the intensity and duration of activity of the mouse many times over that exhibited during a diet largely of fat.—*L. T. Spencer* (Yale).

352. Poliakowa, A. T. **Manoiloff's “race” reaction and its application to the determination of paternity.** *Amer. J. Phys. Anthropol.*, 1927, **10**, 23–29.—The results of author's blood tests on over 1500 individuals, according to the Manoiloff method, show important corroboration of the claims of this author. The tentative conclusions are that: In racially pure marriages the child's blood has the same reaction as the father's and the mother's. If the child's and the mother's blood give a different reaction, the father does not belong to the mother's nationality. If the child has a distinct race reaction which does not correspond to the mother's nationality, the father may belong to the nationality the reaction of which has been found in the child. Attention is also called to anthropometric and other methods of the identification of parentage.—*A. Hrdlicka* (Smithsonian Institution). (Courtesy of the Wistar Bibliographic Service.)

353. Poppi, U. **Le comportement paradoxal du reflexe medio-pubique dans l'hémiparésie.** (The paradoxical manifestation of the medio-pubic reflex in hemiplegia.) *Riv. pat. nerv. e ment.*, 1927, **32**, No. 3.—This reflex, first described in 1925 by Guillain and Alojoanine, consists in a contraction of the straight muscles of the abdomen, elicited by percussion of the pubic symphysis. The author concludes from his observation: (1) that there is a periosteal tendinous reflex distinct from the cutaneous abdominal reflexes (multiple sclerosis, tabes dorsalis); (2) the reflex is ordinarily absent in the side affected, as is the cutane-

ous abdominal reflex; (3) the behavior of the medio-pubic reflex in hemiplegia is therefore paradoxical.—*G. Corberi* (Milan).

354. Rogers, F. T., & Martin, C. L. **A roentgenological study of gastric hunger motility in a series of healthy men.** *Amer. J. Physiol.*, 1927, **82**, 113-120.—Roentgenograms of the gastric hunger contractions of 5 healthy men. At least two types of contraction are revealed: (1) hyper-peristalsis, and (2) tonic or circular contraction of the lower third or antral end of the stomach. At the height of the hunger contraction there is complete obliteration of the lumen of the lower portion of the stomach. This corresponds with the time of most intense hunger pangs.—*M. J. Zigler* (Wellesley).

355. Sachsenberg, E. **Ein Beitrag zum Problem Arbeit und Rhythmus.** (Contribution to the problem of work and rhythm.) *Zsch. f. angew. Psychol.*, 1927, **28**, 462-477.—A study of the effect of rhythmic and anti-rhythmic stimuli upon work and fatigue. Five subjects were trained to perform a series of rhythmic movements with Indian clubs, etc. This series of movements was repeated at intervals with either a rhythmic or an anti-rhythmic accompaniment. Measurements were made of breathing and blood pressure. The character of the movements under the two sets of conditions was determined by an elaborate photographic technique. It was concluded that the character of the whole movement is affected by the rhythmic or anti-rhythmic accompaniment, that the latter increases weariness, and that practice reduces the influence of both rhythm and anti-rhythm.—*A. T. Poffenberger* (Columbia).

356. Sagin, K., & St. Oberg, —. **Le reflexe du malleolus exterieur et le phénomène de Pietrokski.** (The reflex of the external malleolus and the phenomenon of Pietrokski.) *Riv. pat. nerv. e ment.*, 1927, **32**, No. 3.—The reflex of Pietrokski, according to the authors, is "plantar flexion of the foot produced by the contraction of the gastrocnemius muscles in connection with the tibialis anticus, a condition of relaxation." This phenomenon is observed only in cases where there is an organic lesion in the nervous system and should not be confused with the reflex of the tibialis anticus, which indicates only an exaggerated reflex activity in those persons who do not have organic lesions of the nervous system. The reflex of Pietrokski resembles the reflex obtained by Baldrizzi by striking the external malleolus.—*G. Corberi* (Milan).

357. Skeels, A. G. **How and why practice makes perfect.** New York: Gregg (*Gregg Educ. Monog.*), 1927. Pp. vii + 116. \$0.20.—This monograph is devoted to a discussion of the elements favorable to rapid improvement in the performance of acts of skill, with special reference to typing, shorthand and handwriting. Four factors are essential if practice is to result in improvement: repetition, success at least part of the time, knowledge of when successes occur, and a greater degree of satisfaction with successes than with failures. "Thinking while practicing," particularly thinking of the goal, is necessary if performance is to be automatized at a high level. The principles of the breaking of habits, the influence of "states of mind" upon improvement, the nature and importance of the work of the teacher, and the need for research in the acquisition of skill are discussed. Many of the well known factors in learning are described, and liberal quotations are made from the writings of Book, Starch, Swift, Thorndike and others.—*J. A. McGeoch* (Washington, St. Louis).

358. Tuttle, W. W., & Travis, L. E. **A comparative study of the extent of the knee-jerk and the Achilles-jerk.** *Amer. J. Physiol.*, 1927, **82**, 147-152.—An apparatus for eliciting Achilles-jerk reflexes is described. The knee-jerk and Achilles-jerk reflexes of 122 subjects, 60 men and 62 women, are measured. Women give larger jerks of both varieties than men, but there is little correlation between the strength of the two reflexes in the same individual. That is to say, individuals who give strong reflexes of one type frequently give weak responses of the other type. More than 8% of the men but none of the women had no

knee-jerk. The extent of the knee-jerk is more variable in women than in men.—*M. J. Zigler* (Wellesley).

359. Tuttle, W. W., Travis, L. E., & Hunter, T. A. A study of the reflex time of the knee-jerk and the Achilles-jerk. *Amer. J. Physiol.*, 1927, **82**, 99–105.—Measurement of the average gross and the average reduced reflex time of both the knee-jerk and the Achilles-jerk in 8 subjects.—*M. J. Zigler* (Wellesley).

[See also abstracts 280, 289, 312, 328, 361, 378, 420, 434, 450, 489.]

PLANT AND ANIMAL BEHAVIOR

360. Bailey, V. Beaver habits and experiments in beaver culture. (Technical Bull., No. 21.) Washington: Government Printing Office, 1927. Pp. 40. \$0.20.—*W. S. Hunter* (Clark).

361. Helson, H. Insight in the white rat. *J. Exper. Psychol.*, 1927, **10**, 378–397.—A demonstration of *Strukturfunktion* in rats, which learned to respond always to the more brightly illuminated (or to the darker) of two food-compartments even though the absolute values of illumination were varied. In a second experiment, rats failed to learn to respond to the darker or the lighter of two gray papers and to climb over the paper to a platform behind which was a food-box. The "right" platform and box were separated from the "wrong" by a partition. On the "wrong" platform an electric shock was given, which frightened the animals considerably. "The conditions demanded by the Thorndike and Watson theories were satisfied, because all four rats accidentally chose the correct gray . . . , yet no learning took place." Two of the rats showed insight by climbing over the partition from the "wrong" to the "right" food-box.—*F. A. Pattie* (Harvard).

362. Horning, E. S. On the orientation of mitochondria in the surface cytoplasm of infusorians. *Austral. J. Exper. Biol. & Med. Sci.*, 1927, **4**, 187–190.—Two species of infusorians were studied, *Paramecium* and *Nyctotherus cordiformis*. It was found that the rod-like mitochondria of *Nyctotherus* are arranged one behind the other in longitudinal rows, with a polarity more or less transverse to the axis of the cell. In *Paramecium* the same arrangement holds, except that the mitochondria show a longitudinal polarity to the axis of the infusorian. The author finds that myoneme threads run parallel to and beneath the rows of cilia, causing the surface cytoplasm to be thrown into corrugations. The mitochondria apparently accumulate in these corrugations, and the myoneme threads cause their segregation into distinct longitudinal rows. In *Paramecium* the mitochondria are arranged in longitudinal order because the myoneme threads are close together. The article contains five figures.—*J. R. Liggett* (California at Los Angeles).

363. Judy, W. Training the dog. Chicago: Judy Pub. Co., 1927. Pp. 111. \$1.50.—A practical presentation, by the editor of the Dog World Magazine, of views on the training and care of dogs.—*W. S. Hunter* (Clark).

364. Passemard, E. Quelques observations sur des chimpanzés. (Some observations on chimpanzees.) *J. de Psychol.*, 1927, **24**, 243–254.—This is a journal of observations on the behavior of five chimpanzees, ranging from 17 years to 19 months. The author notes numerous affective phenomena, centered about sex. Maternal and paternal love, as well as pre-maternal love in the case of a young unfecundated female, were evident. Gluttony and curiosity appeared in the infant chimpanzee and jealousy was present in all. Physical pain, despair, etc., were expressed in the same manner as by man. The author also noted such phenomena as spitefulness, disgust, coquetry, and prolonged resentment. A tendency toward promiscuity and assumption of physical supremacy appeared on the part of the male. Cooperation between the sexes in the solution of problems

was observed. The complexity of behavior and the evidence of concerted action suggest that chimpanzee intelligence is greater than has yet been demonstrated.—*C. M. Diserens* (Cincinnati).

365. **Pitt, F.** *Animal mind*. New York: Stokes, 1927. Pp. 340. \$4.50.—An English naturalist discusses the mentality, personality, and intelligence of mammals and birds largely upon the basis of her own observations. Such alleged instincts as migration, homing, and nest-building also are examined. The author believes in the existence of a magnetic sense which supplements intelligence and experience in the guidance of migration. The book contains numerous half-tone illustrations.—*W. S. Hunter* (Clark).

[See also abstracts 281, 290, 314, 337, 340, 341, 346, 350, 351, 373, 392, 394.]

EVOLUTION AND HEREDITY

366. **Bernard, L. L.** *Hereditary and environmental factors in human behavior*. *Monist*, 1927, 37, 161–182.—Instinct and environment are the factors discussed in this article. While the author does not deny instincts, he tries to show that it is not these instincts in man, but man's ability to adjust his intellectual powers to create and invent, that form the adjustments for social environment. The problem of human nature—whether things were predetermined for man, or whether man can reconstruct them for each new age, when the correct environmental forces are used—is the basic matter of the service of the social sciences. Through the control of environment, within possible limits, lies the main road to social improvement.—*C. M. Diserens* (Cincinnati).

367. **Crew, F. A. E.** *The genetics of sexuality in animals*. New York: Macmillan, 1927. Pp. 188. \$4.00.—A compact and fully documented account of the entire problem of sex determination, excluding plants. The author is interested not only in the gene and its end result, but in the inadequately known region of developmental physiology between, and expresses the opinion in his preface that pure genetics, as a weapon for attack on the problem of evolution, is now becoming somewhat blunted. Of special interest is the concluding chapter on the sex-ratio, wherein extensive data on the spontaneous variation and experimental modification of this character are brought together. Four bibliographies (totalling about 500 items) are presented, including some rarely encountered titles from Spanish, Russian and Italian laboratories.—*R. R. Willoughby* (Clark).

368. **Cummins, H., & Midlo, C.** *Dermatoglyphics in Jews*. *Amer. J. Phys. Anthropol.*, 1927, 10, 91–113.—A report of findings in a comparison of 200 Jews with previously analyzed European-American material (Cummins and Midlo, '26). No variants of the palmar main lines have been found as unequivocal racial distinctions of general ridge direction over the distal palmar area. The thenar (plus first interdigital), hypothenar, and second and third interdigital patterns of the palm are more abundantly represented in Jews. While the fourth interdigital pattern is of equal occurrence in the two racial collections, the incidences of its varieties are dissimilar, 4^t being in the ascendancy in Jews. In Jews there is a reduction of the Ha variety of the palmar hypothenar. Whorl patterns are represented on the fingers of Jews in greater numbers than in European-Americans, their increase being distributed among the five digits. Hands bearing the combination of five whorls are more common in Jews. Plantar hypothenar patterns occur more commonly in Jews, and the three plantar interdigital areas show reduced numbers of open fields, with increase in configurations of the W and N types. The hallucal pattern in Jews is more frequently of the whorl type than a distal loop (A), reversing the relation obtaining in European-Americans; the B type is considerably increased in Jews.

H. Cummins and C. Midlo (Tulane). (Courtesy of the Wistar Bibliographic Service.)

369. **Davenport, C. B.** **Measurement of men.** *Amer. J. Phys. Anthropol.*, 1927, 10, 65-70.—A general statement concerning the desirability of expressing quantitatively the physical, mental, and temperamental qualities of human beings. Reference is made to the significance of such quantitative results for the study of human heredity, the difference between races, the mixtures of races, and for the interpretation of the effects of growth- and differentiation-promoting hormones upon size and proportions of the body.—*C. B. Davenport* (Carnegie Institution of Washington). (Courtesy of the Wistar Bibliographic Service.)

370. **Hirsch, N. D. M.** **Cephalic index of American-born children of three foreign groups.** *Amer. J. Phys. Anthropol.*, 1927, 10, 79-90.—The cephalic index of nearly two thousand American-born children of Russian Jewish, south Italian, and Swedish parentage was secured. The average cephalic index of American-born Jewish children is 81.1—about three points less than for Russian-born Jewish children. Head length of the American-born Jewish group is greater for each age group, and head width is less for each age (with three exceptions out of twenty-two groups) than in Russian-born Jewish children. The cephalic index of 540 American-born Neapolitan and other south Italian children, exclusive of Sicily, is slightly more dolichocephalic than that of Neapolitans in Naples. However, our averages are due, in part, to the inclusion of children of south Italian extraction other than Naples. This is demonstrated by the distribution of the cephalic indices of our Italian children of both sexes, "double maxima" occurring in both distributions. The average cephalic index of 404 Swedish-American children was around 78.5—approximately what it is in Sweden. These 404 children were divided into three groups: (1) those whose mothers resided less than twenty years in America; (2) those whose mothers resided twenty years or more in America; (3) those whose mothers were American-born, but whose grandparents were Swedish. Comparison of cephalic indices of these groups show that the index changes insignificantly, if at all. The author shows that none of the four hypotheses evoked to explain the possible change in the cephalic index of some of our immigrants can be maintained, and predicates the hypothesis that head length and head width are determined mainly by psychological factors operating via the ductless glands, especially the thyroid, adrenal, and pituitary glands.—*N. D. M. Hirsch* (Tennessee). (Courtesy of the Wistar Bibliographic Service.)

371. **Lentz, T., Jr.** **Relation of I. Q. to size of family.** *J. Educ. Psychol.*, 1927, 18, 486-496.—The intelligence quotients of 4330 pupils, ranging in age from 6 to 20 and in grade from first through high school, were computed from scores on various group tests. As the number of children in the families increases the median I. Q. decreases, with but one exception. The correlation between I. Q. and number of children in a family varies from -.095 in one community to -.41 in another. Since there are a larger number being born of low I. Q. the general trend is toward a lower intelligence.—*A. M. Jordan* (North Carolina).

[See also abstracts 291, 345, 352, 414, 418, 428, 442.]

SPECIAL MENTAL CONDITIONS

372. **Allport, G. W.** **Concepts of trait and personality.** *Psychol. Bull.*, 1927, 24, 284-293.—A review of literature (46 titles) shows confusions to be found in many attempts to list or describe traits of personality. It is suggested by the reviewer that a trait be defined: (1) as an independent statistical variable; (2) as a dynamic trend of behavior that results from the integration of numerous

specific habits (a hierarchy); and (3) as a general habitual mode of adjustment that has a directive influence upon specific responses. Theoretical and experimental studies in monographs, textbooks, etc., are cited as contributing to each of the three phases of the definition offered. Personality as a whole—it is recommended on the basis of the literature—is to be conceived neither as inherently synthesized, nor as merely a list of dissociated traits, but as including major and minor syntheses and disconnected acts, all being a matter of degree.—*J. F. Dashiel* (North Carolina).

373. **Bast, T. H., & Loevenhart, A. S.** *Technique and method for the study of exhaustion due to lack of sleep.* *Amer. J. Physiol.*, 1927, 82, 121-126.—Description of a simple apparatus by which animals (rabbits) are kept awake under vigorous and continuous exercise until complete exhaustion occurs. There is a brief description of the behavior of the animals and of methods by which histological changes in the tissues are to be determined. Methods of determining functional and biochemical changes are also suggested.—*M. J. Zigler* (Wellesley).

374. **Brown, W.** *Mind and personality.* New York: Putnam, 1927. Pp. x + 356. \$2.50.—The author of this volume proposes to present a synoptic view of personality as a unity, considering it scientifically from the points of view of psychology, psychopathology, and philosophy. The term personality as used here connotes the unity of the mind, or "the final differentiation which an individual has made, as it were, and produced in himself and superimposed upon all that he has inherited from past generations and lower forms of mental evolution." As a means of studying personality the method of "deep analysis"—a term used to avoid the use of psychoanalysis—which has "become technical"—is contrasted with earlier psychological and physiological methods of analysis, and is shown to be by far the more promising means of approaching the problem. Personality is primarily a mental thing, but since mind and body seem somehow interdependent, the author discusses briefly the mind-body problem, definitely rejecting the mechanistic theory because it cannot take into account the purposiveness of behavior. As to the doctrines of parallelism and interactionism, neither of which is very satisfactory, he states that particularly because of the problem of survival of personality after death he "would prefer" the latter. From the psychological point of view the author treats of experience in relation to the "organized self," instinct, emotion, and sentiment, volition, and responsibility and mental disease. Experimental psychology with its psychophysical measurements is also given a place as aiding in an understanding of personality. The physiological basis of character formation is emphasized in a section on child and adolescent psychology, as are also the formation of religious and moral attitudes. Under personality and psychopathology the author treats of "Psychology and medicine," where the importance of the mental attitude of the patient is pointed out; "The early treatment of mental disease," a discussion of methods based upon the theory that all mental disease is also physical; "Suggestion and hypnosis"; "Psycho-analysis"; and "Dissociation and mental unity." From the philosophical point of view personality is treated in its relation to ethics, evolution (largely a discussion of Bergson's metaphysical theory), religion, value, and a final chapter on "Survival of bodily death." A bibliography of some one hundred and fifteen titles completes the volume.—*L. M. Harden* (Clark).

375. **Corrie, J.** *A B C of Jung's psychology.* London: Kegan Paul, 1927. Pp. 85. 3/6.—The author has attempted to state clearly, briefly, and untechnically the essential notions of Jung's doctrines. The first chapter is entitled "Mind and its structure" and summarizes Jung's views of the complex character of what is usually called personality and of its constituent elements and its relation to the collective unconscious. The second chapter is the longest, and

deals with "The mind and its functions." Here Jung's conceptions of thinking, feeling, sensation and intuition are explained and the general classification into extravert and introvert in relation to each of these illustrated and discussed. The third chapter deals with "The mind and its disturbances" and explains the notions of conflict, regression, repression and projection. The final chapter discusses the interpretation of dreams and expounds Jung's way of conducting this, dealing in particular with the notions of the dream as a picture of the whole individual, as having prospective significance and as symbolic.—*F. C. Bartlett* (Cambridge).

376. **Courbon, P.** *Sur la pensée mystique et la pensée morbide.* (Concerning mystic and morbid thought.) *J. de Psychol.*, 1927, **24**, 146-159.—Mystic is distinguished from normal thinking by the concomitance of a conscious modification of coenesthesia. This is expressed by the feeling of the supernatural, interpreted in terms of the subject's faith. He experiences corporeal or intellectual vision according to his type of imagery. The state of mystic consciousness is capable of logical organization and may assume a social form. Morbid thinking is also accompanied by modification of coenesthesia, but of a more complex nature. Multiple obscure emotions, change of personality, and delirium, hallucinatory or otherwise according to image type, appear. This morbid consciousness resists discursive elaboration and logical organization, and cannot assume social form. Mystic thinking is abnormal, but equally removed from morbid and normal. The notion of abnormal as intermediate between normal and pathological is essential to proper classification of reactions and to biological and psychological theory.—*C. M. Diserens* (Cincinnati).

377. **Dalma, G.** *Considerazioni sulla concordanza esistente fra alcune tesi della dottrina psicoanalitica ed alcuni dati della psicologia sperimentale.* (Considerations on the agreement between certain theses of the psychoanalytic doctrine and certain data of experimental psychology.) *Archivo generali di neurologia, psichiatria e psicoanalisi*, 1926, **8**, 154-169.—Freud's theory of hallucinations, which starts from psychogenetic and psychodynamic presuppositions, arrives at a formulation identical with that of Tanzi, whose point of departure is anatomical-physiological. The findings of Jaensch as to the prevalence of the eidetic type in children, and those of Varendonck, which prove the increasing predominance of visual images in day dreaming in proportion as they take place further from the surface of waking consciousness, corroborate in part Freud's thesis as to the regressive nature (temporal and spatial) of the hallucinatory facts. Ziehen's theory as to the importance of the constellation factor of the latent images in the association of ideas agrees with the psychoanalytic teachings with regard to the psychodynamic mechanism which causes repression.—*R. Schwarz* (George Washington University).

378. **Darrow, C. W.** *Some physiological conditions of efficiency.* *Psychol. Bull.*, 1927, **24**, 488-505.—Various studies (156 titles listed) have shown the impairing effect of alcohol doses upon psychological functions. For opium derivatives, for veronal, and for cocaine, it is true that a drug may be stimulating or depressing depending upon the amount consumed and depending upon the particular mechanisms observed. Recent studies again find general stimulating effects from caffeine and strychnine and specific stimulation of color vision from mescaline. Studies of endocrine functions have been mainly confirmatory, showing the importance of the thyroid to general metabolism, of the parathyroid to calcium supply, of the pituitary to smooth muscular tonus and to reproductive functions, of the adrenal to functions supported by the sympathetic system, of the gonads to oestrum and to general bodily activity. Diet is demonstrated to influence sexual development and activity. The effects of hunger and of atmospheric conditions have been studied.—*J. F. Dashiell* (North Carolina).

379. **Deryabin, V. S.** [The mechanism of the elaboration of hysterical

hallucinations.] *Obozrenie psichiatrii, nevrologii i refleksologii* (Review of psychiatry, neurology and reflexology), 1926, No. 3, 203-208.—In a patient with somatic disease (tuberculosis of the lungs and myodegeneratio cordis) hallucinations with the following content were observed: A giant walked into the room and struck the patient repeatedly on the head with some object. Ten years previously the patient had had a dream which was very similar to this hallucination. He dreamed that a giant came in and struck him on the chest with his fist. Terrified, the patient seized the giant's hand and squeezed it so hard that the bones snapped. After turning on the light he saw that he had crushed a mouse which had jumped on his chest. Analysis of all that the patient had experienced yielded the following: on the one hand, a progressive diminution in strength and energy under the influence of serious bodily conditions, a whole series of severe acute infections and tuberculosis; on the other hand, a great disappointment in his personal life and as a result the breaking down of his social ideals. Already ill, he continued his work, although it overtaxed his strength. His co-workers in the social sphere, not knowing his condition, drove him on to work. This aroused in him a feeling of mortification. The weakening of his memory, power of attention, and mental faculties caused him to fear the complete breakdown of his mental powers. At the height of his life-conflict the patient exhibited the above-mentioned hallucinations, of which the author gives the following interpretation: The giant is the symbol of the hostile forces which torment the patient. The circumstance that the giant directs the blow, not against the chest, but against the head, symbolizes the apprehension of the patient as to his mental condition. According to the author these hallucinations afford a clear example of the dependence of hallucinations upon the patient's emotional experiences, his wishes, fears, etc. An explanation to the patient along these lines gave a therapeutic result.—*V. S. Deryabin* (Leningrad).

380. Dooley, L. *Analysis of a case of dissociation combined with phobias and compulsions.* *Amer. J. Psychiat.*, 1927, 7, 245-267.—The patient, a young woman of 25, for three years had had episodes lasting from a few seconds to several hours when she became disoriented, was uncertain of her identity, and, if she were on the street, did not know how to get home. These attacks disappeared after about ten psychoanalytic treatments, but other symptoms, obsessive thoughts, compulsive acts, and phobias, which were found to be related to the dissociations, were more stubborn, and cleared up through analysis and transference only after several months of treatment. Some account is given of the uncovering of the underlying complexes and of the explanation of the mechanisms. Although the analysis was not completed, the patient is making a fairly satisfactory adjustment.—*B. Kendall* (Boston Psychopathic Hospital).

381. Flügel, J. C. *Sexual and social sentiments.* *Brit. J. Med. Psychol.*, 1927, 7, 139-176.—The article is concerned with certain aspects of this struggle between social forces and sexual trends. The intra-psychic struggle which results from sexual repression is likened to the biological antagonism between individuation and genesis, according to the biological philosophy of Herbert Spencer. Individuation is bound up with socialization, sexual love being relatively of an asocial character. As evidence of this struggle, the author states: "Our great social institutions, our schools and colleges, our clubs, our armies and our churches, are all concerned in some degree or other to keep sex at a distance." (p. 140.) Two chief views as to the nature of the principal instinctive energies involved in the sexual and social tendencies respectively, are first the view that the instincts of sex and of the "herd" are separate and distinct. Second, (Freud's libido theory) that the instinctive energies involved in both are at bottom the same, the social tendencies being only special differentiations of the sex instinct. Following Freud, the author distinguishes four important ways in which social tendencies differ from sexual tendencies; all of these factors serve to

make social relations between members of the same sex ("homosocial relations") easier than social relations between members of the opposite sex ("heterosocial relations"). Six reasons are cited why male homosociality is nearly always more developed than female homosociality. Under present-day conditions the social differences between the sexes are tending to diminish, and women are coming to take a large share in social life. This increased social life of women is largely heterosocial, thus also improving the heterosociality of men. Family sentiments, though somewhat antagonistic to social attitudes, act also as a stepping-stone to them. The family unit (based on blood relationships) is the most primitive social unit, but it receded in the "Totemic Age," the clan becoming more important. A number of facts point to a deep-lying connection between sex and sociability. One is the positive correspondence between larger social groups and sexual freedom. Second, the author offers four reasons why romantic love aids rather than impedes the formation of social sentiments. Third, the simultaneous reinforcement of both at adolescence. Fourth, organic or functional disturbance of the sexual life also disturbs the social life. By way of summary of the article the author concludes: "In the light of these considerations it would seem that the antagonism between sexual and social feelings only concerns the direction of energy at a relatively high level and that the satisfactory development of the social sentiments to some extent presupposes and depends on the healthy function of the sexual tendencies. As we have seen too, much of the antagonism is really connected, not with the sexual trends as such, but with jealousy, and the extent of the antagonism is perhaps being diminished at the present time by a decline in the importance of the element of possession in the sexual life."—N. Fenton (Ohio).

382. Freud, S. **The problem of lay-analyses.** (With autobiography, and introduction by S. Ferenczi.) (Trans. by A. P. Maerker-Branden and J. Strachey.) New York: Brentano's, 1927. Pp. 316. \$2.50.—This work was inspired by the present agitation by physicians for laws prohibiting the practice of psychoanalysis by persons without the M.D. degree. The argument is developed by conversation with an "impartial referee," hypothetically deputed by the legislative arm to hear arguments and advise; the style is therefore somewhat popular. A large section is given to explanations of the mechanisms of the neuroses and of the theoretical principles and practical techniques of analysis, and might be regarded as a simplified, condensed and authoritative digest of the tenets of the school. The point of view of the author on lay analysis proper is that no person should practise psychoanalysis who is not thoroughly qualified, and that the question whether he does or does not possess the M.D. is largely irrelevant; however, since the medical curriculum is already heavily overloaded, since most of the material therein included is useless to the analyst while much that he needs does not appear, and since, whether physician or not, he must rely on other physicians for strictly medical advice during analyses, it follows that the adequate training of a supply of lay analysts would do much toward relieving the existent mass of neurotic misery. The autobiography consists of 128 short pages, and originally appeared in a German collection of medical autobiographies in 1925. It may serve also as a condensed history of psychoanalysis.—R. R. Willoughby (Clark).

383. Glover, E. **Lectures on technique in psychoanalysis. I. The analytic situation. II. The opening phase.** *Int. J. Psychoanal.*, 1927, 8, 311-338.—The beginner is warned against analysis of slips, forgetting, dreams, etc., irrespective of the analytic context. The weakening of ego defense systems must precede the interpretation of unconscious phantasy material. The stages of analysis can be described chiefly from the libido side (Ferenczi and Rank) or from the ego side (Alexander), but a too rigid preconception of the form and course of the analysis is undesirable. Details are given about different types of

anxious reaction in the opening phase and the method of their treatment.—C. Moxon (San Francisco).

384. Goldblat, G. O. [The "renovation" of church spires: data for the study of religious epidemics.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 681-690.—The author came to the following conclusions from the study of data gathered by him concerning the brightening of the church domes and crosses in Kiev and Rostov a/D. (1) The question concerning the "renovation" of church domes and crosses in the period mentioned can not be regarded as finally answered, although apparently some domes and crosses have actually become brighter, due to atmospheric influences. (2) The dome renovations, or the rumors of such, have contributed to a considerable degree to the development and spread of the psychic epidemic of "the renovation of the sacred images." (3) The rumor as to the renovation of a dome of the "Church of the Afflicted" in Kiev has given rise to visions in many believers. (4) The contradictory statements by different persons concerning the appearance of the domes and crosses concerned, in Kiev and Rostov a/D., afford a notable contribution to the psychology of testimony.—A. L. Shnirman (Leningrad).

385. Groddeck, G. The book of the It. (Continued.) *Arch. Psychoanal.*, 1927, 1, 670-740.—This section treats of the universal sadistic tendency and its relation to love and to disease. By analyzing cases of organic disease, Groddeck finds evidence that the unconscious forces in the "*Es*," including the sadistic self-punishment tendency, can produce either symptoms that are diagnostically indistinguishable from organic disease or actual organic disease in organs that are specially associated with guilt-laden fantasies, e.g., the eye, hand, tongue, breast, uterus or genital. All diseases satisfy the *Es* in so far as they imply a return to a state of childlike dependence on the mother. Psychoanalysis can therefore be used to remove psychical factors in the maintenance of symptoms, whatever their origin may have been.—C. Moxon (San Francisco).

386. Hartman, W. C. [Ed.] Who's who in occultism, new thought, psychism and spiritualism. (2d Ed.) Jamaica, N. Y.: The Occult Press, 1927. Pp. xviii + 326. \$5.00.—W. S. Hunter (Clark).

387. Heuyer, —. Ce que l'on appelle l'automatisme mental. (The condition called mental automatism.) *Encéph.*, 1927, 22, 464-473.—Mental automatism (of Clémambault) is a clinical syndrome, that is to say, an assemblage of symptoms which constitute an autonomous system. The combinations of these symptoms are variable as far as concerns associations with syndromes of another group. These symptoms comprise two groups. First, there is the essential group, comprised chiefly of echo of thought, of utterance of acts, of inner dialogues, of propelling hallucinations. Second, there is the accessory group, composed of auditory and visual hallucinations with spatial exteriorization, the psychic hallucinations *par hyperendophasie*. This grouping of symptoms shows triple automatism: sensory, motor, and ideoverbal. It groups all known types of hallucinations. To this grouping the author adds a new symptom, the divination of thought, and he applies the notion of mental automatism to certain deliria of influence which he calls symptomatic. The concept of mental automatism facilitates the examination of the patient, furnishes valuable data for ferreting out an organic state, and brings back a certain number of mental diseases into the list of general diseases of an organic nature.—Math. H. Piéron (Sorbonne).

388. Janet, P. La peur de l'action. Part II. Les terminaisons de l'action, les échecs et les triomphes. (Fear of action. Part II. The terminators of action, defeats and triumphs.) *Rev. phil.*, 1927, 52, 5-21.—The regulation of actions within the individual is the subject matter of the present paper. An important adjustor of our acts is the terminating act that checks or brings to an end another act. The terminator may take one of two essential forms, that of

retreat and that of triumph. Now in some pathological conditions the initial act continues without the intervention of the check, as in phobias. In other abnormal cases the terminative acts of retreat (failure) and of triumph (success) may become excessive and perverse. In retreat fugues or negativisms frequently become dominant, in triumph a random variation of diffuse activity is instigated. The direction the terminating act takes is largely determined by habit, character and education. The action of retreat plays a rôle in the sentiment of sadness, that is, in the fear of action of the melancholic. On the other hand, the action of triumph induces the sentiment of joy, in the love of action of the maniac.—T. M. Abel (Illinois).

389. Jastrow, J. **The withered arm.** *Century*, 1927, 114, 398-406.—The author attempts to show that Wilhelm II, former Kaiser of Germany, developed an inferiority complex as a result of a withered arm, and points out the political complications arising from his efforts to compensate for this physical handicap.—J. R. Liggett (California at Los Angeles).

390. Johnson, W. H. **Hegel and Freud.** *Monist*, 1927, 37, 553-577.—Freudian psychology may be translated into Hegelian terms, with advantage to the otherwise faulty logic of the subjective which it involves. The unconscious self is a contradiction in terms, for which may be substituted the concept of the mind being in a lower category; a category being a state of mind in which it is so related to the external as to be aware of it as a collection of a particular kind of terms related in a particular manner. There are obviously several categories corresponding to various conscious levels. Slips of speech, compensation, etc., are examples of mental operations in lower categories. Repression is regression from higher to lower. Dreams represent operations in lower categories with appropriate logic of the level. Neuroses are in essence negations, achieved after a relapse of the mind into lower categories. Sublimation is progress toward higher categories in mental manipulation of a problem. It is the practical analogue of logical synthesis; the psychoanalytic task is difficult because of the different categories in which doctor and patient move. Freud is right in his view of the subjective origins of art and ethics, but disregards the logic of subjectivity and does not critically estimate the range of conflict in the attainment of mental adjustment.—C. M. Diserens (Cincinnati).

391. Kiesow, L. **Un caso di amnesia.** (A case of amnesia.) *Arch. ital. psicol.*, 1927, 5, 242-244.—Deals with the case of A. Bourne previously reported by James.—H. Klüver (Columbia).

392. Kleitman, N. **The effect of starvation on the daily consumption of water by the dog.** *Amer. J. Physiol.*, 1927, 81, 336-340.—Kleitman and Crisler reported previously that the salivary conditioned reflex yields a much smaller quantity of saliva in the starved animal than in the fed animal, and that after realimentation of the starved animal a larger amount of saliva is conditionally secreted. Kleitman now finds that dogs drink only about one-half as much water when starved as when fed, and that their total water intake is only about one-fifth to one-third that of the normal dog. This decrease in water intake is suggested as one of the probable causes of the deterioration of the salivary conditioned reflex during starvation.—M. J. Zigler (Wellesley).

393. Landis, C. **Electrical phenomena of the body during sleep.** *Amer. J. Physiol.*, 1927, 81, 6-19.—Following the suggestions of Féré, Gildemeister, Waller and others regarding methods of recording electrical phenomena of the body, Landis attempted to determine whether the depth of sleep can be measured in terms of change in electrical resistance. Using a single subject, no reliable electrical change was found by means of which the depth of sleep could be measured. The criticism is offered that it is unjustifiable to speak of any single physiological change as an adequate indicator of the depth of sleep.—M. J. Zigler (Wellesley).

394. **Leake, C., Grab, J. A., & Senn, M. J.** **Symptomatology in rabbits of exhaustion due to lack of sleep.** *Amer. J. Physiol.*, 1927, **82**, 127-130.—Adopting the Bast and Loevenhart method of producing exhaustion in animals, 20 rats, 6 of which were discarded later because of high leucocyte count, diarrhea, etc., were subjected to exhaustion due to lack of sleep. The method proved successful but the results show marked variation in the resistance of different animals to loss of sleep, ranging from 7 to 31 days to produce complete exhaustion. The approach of collapse is attended by sudden fall in temperature, rise in pulse rate followed by a sudden and marked fall, and gradual fall in breathing rate.—*M. J. Zigler* (Wellesley).

395. **Naumov, F. A.** [Suggestibility in normal and in insane persons.] *Sbornik, posvyashchennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 569-588.—The author measured the suggestibility of 50 normal persons and 125 insane (of both sexes) whose state of insanity was not very acute. The latter were classed in three groups: the congenitally feeble-minded, those with organic disorders, and those with disorders resulting from various psychoses. The methods used by the author were the Binet-Simon progressive hypnotizing series (indirect process) and the Netchaev method giving false suggestions to the organs of sight, smell, taste and pain (direct process). The two methods, according to the author, enable one to determine the degrees of suggestibility. The suggestibility of the insane is found to be four times greater than that of normal adult persons. The suggestibility of children is intermediate (works of Prof. Netchaev, and of Doctors Stchegloff, Vitale-Vitali and others), but approaches nearer to the suggestibility of the insane than to that of normal adults.—*A. L. Shnirman* (Leningrad).

396. **Paulhan, F.** **La double fonction du langage.** (The double function of language.) *Rev. phil.*, 1927, **52**, 22-73.—According to Paulhan language plays two important rôles, that of significance and that of suggestion. In significative language, ideas, thoughts and sentiments are literally revealed. In suggestive language ideas are only partially revealed or become perverted; they suggest a variety of mental states. Illusions, allusions, ironies, and falsehoods are sustained by suggestive communication. Furthermore, suggestion creates new thoughts and sentiments; it finds its greatest outlet in literary and in poetic expression. Individuals vary greatly in their use of the two forms of language. The routine worker excels in the significative, the dreamer in the suggestive. In social life the function of significative words and phrases is to assimilate and unify public opinion, whereas suggestive terminology acts more as a means of differentiation and division of group expression.—*T. M. Abel* (Illinois).

397. **Payne, S. M.** **Observations on the formation and function of the super-ego in normal and abnormal psychological states.** *Brit. J. Med. Psychol.*, 1927, **7**, 73-87.—The article is theoretical, and contains many quotations from the literature. "A survey of the analysis of various forms of psychoneurosis with the object of relating, if possible, different types of super-ego formations with recognized forms of neurosis, enables us to distinguish at least four groups of cases. 1. In the first group of cases I have classified those which demonstrate markedly a mixed parental identification in their super-ego formation. . . . 2. In the second group I have classed cases in which the identification with the opposite sex preponderates, leading to different forms of homosexuality. . . . 3. My third group consists of cases in which the super-ego manifests abnormally aggressive characteristics, leading in one class, namely the obsessional neurosis, to extensive reaction-formation in the ego for the purpose of evading guilt consciousness, and in a second class, consisting of the depressed states and melancholia, to the possibility of self-destruction. . . . 4. In the fourth group of cases the early formation of the super-ego has been interfered with or appears to be isolated and shut off. . . . In conclusion I would remind you that the organiza-

tion of the super-ego corresponds in its functions to the herd instinct which has been formulated by many psychologists; primarily, in early life, it represents an attempt at adaptation to family life, secondarily, in adult life, the mode of its development is a measure of social adaptability. A failure of adaptation to family life, when the environment is favourable, is a precursor of failure in group life. "This is obvious enough to be a platitude."—N. Fenton (Ohio).

398. Prinzhorn, H. *Um die Persönlichkeit. Gesammelte Abhandlungen.* (On personality. Collected papers.) Heidelberg: Kampmann, 1927.—The well-known author of the *Bildnerei der Geisteskranken* here takes a position in regard to some fundamental problems of the new psychology. He studies the relation of "character and fate," "art and mental disease," "psychiatrist and psychoanalysis," "value-need and value-obligation," "love and ourselves," etc. He also sketches briefly the problem of "occultism and the occult." He is himself a specialist in nervous diseases, and, approaching the problem from the doctor's point of view, he seeks to set forth the connection between the newest studies of the soul and characterology on the one hand and the new psychotherapy originating with Freud on the other. He stands consequently on the ground of the new psychology, the origin of which is today in Germany considered to be connected with Nietzsche. This psychology places the unity of mind and body in the center of investigation instead of making the conscious processes almost the only subjects of experimental and descriptive study, as was done by the previous psychology of the schools. Prinzhorn points to the necessity of this new psychology, outlined first of all by Klages, who is yet much too little valued by the faculty psychology—which strives to lay hold of the total personality and its expression and means of expression even to the deepest strata of the subconscious. In the investigation of these deepest layers of the subconscious the new psychology agrees with Freud's latest aims of investigation, if it does employ somewhat different methods and arrive at somewhat different results. Here for the first time these two strongest streams in the present psychological crisis, Nietzsche-Klaces and Freud, are brought into relation with one another, and for the first time work is done on a critical synthesis of both under the consideration also of the weaker streams which flow as companions in the same direction. Next to Klages, Scheler-Köln stands nearest to the author in this regard. In a series of annotations the author gives a short but valuable critical characterization of those German psychologists who are interested in personality at the present time (Adler, Häberlin, Jaspers, Jung, Kretschmer, Spranger, Stern et al.).—Q. G. Walther.

399. Roback, A. A. *Bibliography of character and personality.* Cambridge: Sci-Art, 1927. \$6.00.—A selected bibliography containing over three thousand titles covering the general field of character. Originally planned as an appendix to the *Psychology of Character* by the same author, the bibliography has grown to such proportions as to warrant its inclusion in a separate volume. As well as an author classification of titles with the nature of the material symbolically indicated, which occupies the major portion of the book, the following features are contained in this volume: a list of unpublished theses and works now in preparation, a supplementary list of the less accessible publications, a classification of titles with respect to point of view, directories of periodicals, organizations, and centres devoted to the study of character, and a chronological table noting the historically high points in the study of character and personality.—F. A. Geldard (Clark).

400. Seabury, D. *The bogey of sex.* *Century*, 1927, 114, 528-536.—The writer denies the popular conception that sex is the dominant interest in life, despite the fact that it is given a place of exaggerated importance at present. This hypersexuality, he says, is not a result of Freudian teachings, but rather is a natural outgrowth of primitive taboos which made a secret of sex, and theology

which tried to banish it. The author regards parentalism as something entirely apart from sex. Sex is considered not as a unified urge, but rather as one of the results of the drive of human nature for expansion. It may be traced to ego impulses, love for adventure, loneliness, and rebellion against limitation, dullness and pressure. It can, the author believes, be returned to its proper place by an attitude of simple naturalness.—*J. R. Liggett* (California at Los Angeles).

401. **Sharma, A. K.** *The psychological basis of autosuggestion.* *Monist*, 1927, 37, 404-421.—If autosuggestion is to become scientific, its psychological foundation must be studied and its principles brought out. In order to make autosuggestion effective, the suggestion must be positive, and it should be relative to the type of mind to which it is given. To the extrovert the suggestion is a synthesis of images; to the introvert, of ideas. Suggestion is given to the subconscious, which is alone able to translate the suggestion into action through the power of imagination.—*C. M. Diserens* (Cincinnati).

402. **Stapledon, O.** *A theory of the unconscious.* *Monist*, 1927, 37, 422-444.—An examination of current conceptions of the unconscious discloses serious inconsistencies in all of them. The most that may be said is that the unconscious is the sum of tendencies or dispositions toward integrative behavior, or that it is a useful hypothesis analogous to the ether of physics. In practice, it represents a return to animism of an inconsistent type. An analysis of the functions and reciprocal influence of the neural and conscious components of behavior leads to the view that all the supposed manifestations of unconscious mental activity are attributable to past consciousness, whether explicit or marginal, and that owing to repression this past consciousness is no longer accessible. All that is unconscious in such behavior, on the other hand, is simply present neural activity.—*C. M. Diserens* (Cincinnati).

403. **Stiles, P. G.** *Dreams.* Cambridge: Harvard Univ. Press, 1927. Pp. 80. \$1.50.—The author communicates a selection from his collection of his own dreams, extending over thirty years. Under sensory content, he instances all the major modes, stressing the visual. As to emotional characteristics, it is noted that the affect may depart widely from the manifest content. The operation of memory and anticipation is observed, and the relation of dreams to external and internal inciting factors is pointed out. The dream personality is seen to remain largely that of a child, inexperienced, unmoral, and boastful. The writer (a physiologist) is concerned with moral rather than with scientific values; he has "preferred to remain an amateur," finds himself in general agreement with Ellis, and in many points disagrees with what he believes Freud to have said.—*R. R. Willoughby* (Clark).

404. **Strauss, E.** *Über Suggestion und Suggestibilität.* (*Suggestion and suggestibility.*) *Schweiz. Arch. f. Neurol. & Psychiat.*, 1927, 20, 23-43.—The foundation for suggestion is a peculiar relationship between the suggestor and the subject (rapport). In this state he submits to the entire person, the whole world of the suggestor. This renders it possible that the individual contents of the instruction be accepted, even those which, on account of their real purport, would normally be refused. This acceptance consists (as in the case of the usual perceptions) in a series in the continuum of reality. The content in question thus remains connected with the remaining content of consciousness, and is not split off from it, as the dissociation theory supposes. In the place of a positive relationship, an affirmation of the will of the suggestor, there can also occur a negation, a complete refusal. Then there ensues a complete disavowal of the content of the instruction, i.e., negative suggestion (repudiation). The more readily a person can enter into a close rapport with the suggestor the greater is his suggestibility.—*R. Meili* (Geneva).

405. **Trenzsch, P. J.** *Rumination in relation to personality development.* *J. Nerv. & Ment. Dis.*, 1927, 66, 245-258.—For the understanding of personality,

e.g., the varied reactions of infants to the same situation, it is necessary to study both the phylogenesis and the ontogenesis. Data relative to heredity and dangers incident to birth are considered. After birth, personality study may begin, and it should be a complete study of the individual functioning as a whole. Many factors must be watched. Ruminative is a very difficult condition, occurring in infants, about which little is known. The neurotic element in it is strong, with a definite history of neurotic tendency in the parents in nearly all cases. It is important in personality make-up. Study of the individual longitudinally, as a whole, is strongly emphasized.—*E. N. Brush* (Boston Psychopathic Hospital).

406. **Watson, J. B.** *The myth of the unconscious.* *Harpers*, 1927, 155, 502-508.—The author denies the existence of an unconscious mind and in its place substitutes the term "unverbalized behavior." The so-called unconscious is regarded as consisting of activities which we cannot describe because we have no word responses associated with them. We cannot think of these activities because thinking is sub-vocal speech. Three types of the unverbalized are described: (1) the unverbalized world of the "silent" man, the man who can do things but cannot tell how he does them because he lacks words with which to describe; (2) the unverbalized world of unstriated muscle responses, emotions, etc., activities for which we have never learned words; (3) the unverbalized world of infancy, a period in which all responses are unverbalized because the child has not yet learned words. Complexes are explained as sets of unverbalized reactions built up about certain situations. The cure for abnormal states consists in unconditioning ill-adapted responses and retraining. The writer suggests that the child's word world should be trained; the child should be taught to express his activities in words.—*J. R. Liggett* (California at Los Angeles).

407. **Weygandt, W.** *Zur Psychopathologie der Sektenbildung.* (On the psychopathology of sect-formation.) *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 663-680.—Times of radical change afford favorable conditions for occultism and mysticism. The performances of the wandering preacher Ludwig Christian Haeusser are to be considered a phenomenon of this sort, though having certain cultural and political aims. Since the year 1918, in various places, particularly in Würtemberg, this man became conspicuous by his discourses, attracted a circle of fanatical young people, including many psychopathic individuals, and gathered a band of followers and disciples numbering, at times, many thousands. The content of his preaching was to reestablish and therefore to fulfil the truth which has been forgotten by all men, that all good and power come from above, and that thereby the people will again be healed; then will come the United States of Europe or of the World, whose President may be Haeusser himself. During his prophetic activity, Haeusser was many times prosecuted at law. Twice he was examined in the Friedrichsberg State Hospital connected with the psychiatric clinic of the University of Hamburg; the beginning of a manic-depressive condition was found, with predominant hypomanic phases and hysterical traits. Meanwhile, although he was not prominent as an agitator, he was proposed as a candidate for a seat in the Reichstag and at another time for Reichspräsident. In the former election the "Haeusser-Partei" received about 40,000 votes, and in the latter, 23,834. Many of his followers exhibit decisive marks of degeneracy, indicating that they are psychopaths of various sorts, degenerate, debilitated or hysterical. Thus in this movement, as in the formation of other sects, and even in the development of the prevailing trends of belief, psychopathic factors have played a certain rôle.—*A. L. Shnirman* (Leningrad).

[See also abstracts 309, 325, 326, 340, 346, 350, 413, 422, 443, 449, 486, 488, 490, 493, 498, 535.]

NERVOUS AND MENTAL DISORDERS

408. Allen, W. **The relation of occupation to migraine.** *J. Nerv. & Ment. Dis.*, 1927, **66**, 131-132.—The idea has come down to us that migraine is more prevalent in the upper classes, or among brain workers. Conflicting views on the question are cited. The occupations of 400 migraineous and 1,000 non-migraineous patients were tabulated, and no evidence was obtained that occupation has any influence on the incidence of the malady.—*E. N. Brush* (Boston Psychopathic Hospital).

409. Bolsi, D. **Sulla natura e genesi delle placche senili.** (Nature and genesis of senile plaques.) *Riv. pat. nerv. e ment.*, 1927, **32**, No. 3.—The author studied extensively the senile plaques of Redlich and Fischer, examining the hypothesis of Urechia and Echeles, according to which the plaques are derived from those elements of the glia which del Rio Hortega has called "microglia" and "dendroglia." Bolsi, who has previously explained his method of ammoniacal silver, believes that the plaques offer proof of a chemical alteration of the basic interstitial material (amorphous) in which exist the morphological elements of nervous tissue. This material may undergo changes in normal or pathological senility as a result of complex or even toxic metabolic modifications. Only under special circumstances are the elements of the microglia which exist in the surrounding tissue involved, and their part consists only in a process of degeneration and destruction. According to Bolsi the dendroglia take no part in the formation of plaques.—*G. Corberi* (Milan).

410. Brazhas, V. N., & Oleinikova, Z. I. [Contribution to the study of traumatic neuroses and psychoneuroses.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 541-568.—The authors investigated 665 cases of traumatic neuroses and psychoses. In view of all the data, they drew the following conclusions: The development of traumatic neuroses and psychoneuroses is favored by hereditary factors and by internal instability of the nervous system. The etiological factors include, on the one hand, physical phenomena, and, on the other hand, complex psychic processes. These diseases are characterized by pathologic symptoms which are more or less distinctive. They are generally chronic, but certain unfavorable factors, e.g., undernourishment, overwork, physical and moral strain, psychic shocks, also certain intoxicants, produce an acute form. It is absolutely necessary to place these patients in special institutions, organized as sanatoria or as colonies, with a regimen of educational work, and with arrangements for all kinds of psychophysical examination and treatment. Psychiatric supervision is indispensable. The great number of traumaties scattered at present among the population form an element dangerous to society. It is necessary to take a census of these persons, to subject them to a periodical medical examination, to undertake a number of prophylactic measures, and to compel these individuals to follow a special treatment either at home or in medical institutions.—*A. L. Shnirman* (Leningrad).

411. Browning, R. C. **Occupational therapy during convalescence.** *Occup. Therap. & Rehab.*, 1927, **6**, 395-404.—The author stresses the advisability of encouraging patients to help others, thus getting attention away from themselves. Instances are cited where a difficult case finally showed progress when the patient was encouraged in some work of a helpful sort. Emphasis should also be placed on the patient's subsequent plans and on the fact that he will be able to fill a satisfactory place in the world. Early treatment is urged as a means of avoiding the patient's getting into careless habits.—*H. E. Burtt* (Ohio State).

412. Busik, M. S., & Mitnitzky, D. M. **Über die Hungerempfindung bei pathologischen Zuständen des Gehirnes.** (On the hunger sensation in pathological conditions of the brain.) *Arch. f. Psychiat. u. Nervenkr.*, 1927, **80**, 643-

655.—Disturbances of the hunger sensation are observed with lesions in different areas of the cerebral cortex. In involvements of the medulla oblongata such disturbances can take place either with lesions in the visceral nucleus of the vagus or in the pathways connecting it with the midbrain. The lack of the feeling of satiety and the gnawing appetite observed in brain diseases are often related to a trauma. At all events the cortex regulates hunger, and the mere presence of the "hungry" blood mixture cannot produce hunger without the cooperation of the brain centers.—W. Wirth (Leipzig).

413. **Cassity, J. H.** *The functional psychoses as an evolution of psychic impotency.* *J. Nerv. & Ment. Dis.*, 1927, **66**, 105-130.—Many mentally disordered individuals are imbued with the idea that they are incapable of properly effecting the act of cohabitation. The origin and development of phantasied sexual inadequacy is related to, if not identical with, the evolution of mental disorder. Rank has given a lucid account of the normal sex metamorphoses which shows pitfalls into which one may stumble in the course of sex development, giving him spurious notions of sexual inferiority. Groups of psychically impotent psychotics are outlined as follows: (1) those traumatized at weaning, (a) those who through compensatory substitution become either latent or active homosexuals as a result of the trauma, and (b) those who remain sexually, although not necessarily intellectually, at the nursing level; (2) individuals libido-nously fixated to preadolescent love objects in a fashion latently incestuous; (3) individuals sexually traumatized through inadvertent preadolescent sexual indulgences of incestuous nature; and (4) those whose love energies are dissipated in avenging imagined parental desertion or neglect, (a) as a result of death of the parent of the opposite sex, or (b) due to jealousy of the parent of the opposite sex. Case studies of each type are presented which show that unfortunate environmental factors often seriously interfere with the normal psychosexual development, obliging the individual to shift his position and change his psychic attitude toward life in order to reconcile his actual or imagined sex inadequacies to sociological and biological requirements. In this shift and transformation he assumes a different perspective from the average individual and hence becomes a neurotic or psychotic. In younger individuals impotency notions are, as a rule, stimulated predominantly by psychic factors rather than by actual gonadal disintegration. While not proposed as an all-embracing basis for the formation of psychotic reactions, psychic impotency has more to do with psychotic developments than has been heretofore believed.—E. N. Brush (Boston Psychopathic Hospital).

414. **Corberi, G.** "Regressio mentis infanto-juvenilis" comme forme infantile familiale. ("Regressive mental infanto-juvenileism" as a form of familial infantilism.) *Riv. pat. nerv. e ment.*, 1927, **32**, No. 3.—The author reports the case of two brothers affected with acute progressive dementia with complete loss of language, and describes its place in the picture of "regressive juvenile infantilism" which has been differentiated from the complex group of the older cerebropathic idiosyncrasies. From the anatomical point of view the cerebral function *in vivo* showed in these two cases certain phenomena closely resembling that of the diffuse lipoidal neurolysis of amaurotic idiocy; and from the clinical point of view there was a rather close correspondence with the syndrome described by Weygandt and Heller as dementia infantilis. Corberi points out the familial character of this malady, a view which he takes because of the two brothers, which confirms the relationship which Higier has found in amaurotic idiocy, although in Corberi's cases there was no perceptible diminution of visual acuity. The description of regressive infanto-juvenileism therefore forms a new chapter in infantile neuropsychiatry, which takes a place between the cerebropathic idiosyncrasies proper and the dementias (paralytic, infanto-juvenile, and praecox).—G. Corberi (Milan).

415. **Dugas, L.** *La psychologie pathologique.* (Pathological psychology.) *J. de Psychol.*, 1927, **24**, 99-112.—Pathological psychology is an independent science and is the indispensable corollary of normal psychology. Its fundamental principle is the essential identity of the normal and pathological postulated by Broussais, approved by Comte and Bernard, and utilized by Ribot and Janet, the former working by the analytic, the latter by the synthetic method. From this principle develops naturally a terminology expressing excess, defect, and perversion of functions, whereby pathological psychology may describe maxima and minima. Even if this fundamental hypothesis is denied, pathological psychology remains a field of phenomena, presenting laws of its own, important to physicians in the definition of disease and to patients in effecting social adjustments. The paper closes with definitions of disease in general and of morbid mental states, and a statement of the contributions of pathological psychology to general psychology.—*C. M. Diserens* (Cincinnati).

416. **Elwood, E. S.** *The National Board of Medical Examiners in Medical Education and the possible effect of the Board's program on the spread of occupational therapy.* *Occup. Therap. & Rehab.*, 1927, **6**, 341-347.—The author calls attention to the danger of the charlatan in the field of occupational therapy even as it has been a danger in the field of general medicine. The importance of setting up adequate professional standards is emphasized. In addition to keeping out undesirables by legal enforcement of a license procedure, it seems also desirable to provide some distinction for successful work in this field. It is suggested that a national examination in occupational therapy for the same purpose as examinations for the practice of medicine would be desirable. The National Board of Medical Examiners would be glad to cooperate in the organization and administration of such an examination.—*H. E. Burtt* (Ohio State).

417. **Farr, C. B.** *Bodily structure, personality and reaction types.* *Amer. J. Psychiat.*, 1927, **7**, 231-244.—Analysis of anthropometric data derived from 25 adult males, 15 with schizoid and 10 with affective reactions, and from 45 adult females, of whom 11 were schizoid, 16 cycloid, 13 had miscellaneous psychoses, and 5 were without psychosis. The most valuable measurements for determining habitus were height, weight, girths of chest and hips, height of pubis, breadths of chest and iliac crests, and distance between the anterior and superior spines. The epigastric angle, though measurable only with approximate accuracy, also seemed useful. The Pignet "Constitutional Index" gave the best correlation with habitus, as determined by measurement and general impressions derived from special, x-ray, and ordinary clinical examinations. As it was possible to emphasize only a single personality trait, the cases were divided into introverts, or seclusive types, and extraverts, or social, expansive types. The results of the study suggest a rather definite association of seclusive and schizoid personalities with the slender, relatively elongated types, often with dysplastic features, and the affective personalities with intermediate or definitely thick-set physiques. Outstanding exceptions and questionable correlations are so numerous that anthropometry must be looked upon rather as interesting and suggestive than as diagnostic. Description of the charts presented and a bibliography follow.—*B. Kendall* (Boston Psychopathic Hospital).

418. **Ganter, R.** *Über Erblichkeit bei der Epilepsie und dem Schwachsinn.* (On heredity in epilepsy and feeble-mindedness.) *Arch. f. Psychiat. u. Nervenkr.*, 1927, **81**, 395-429.—In the 503 epileptics studied alcoholism was found in the ancestry in 13.1% (as against 18.9% by Snell), lues in only three cases in all, mental disease in 2.7%. Among 853 children coming from hereditarily tainted families 19.3% are epileptic or mentally abnormal, among 769 children from untainted families 12.3%. In regard to feeble-mindedness the statements of different authors vary over a particularly wide range, 10% according to Dollinger, 70% according to Weygandt, which points to the great heterogeneousness

of the material. Among 342 feeble-minded studied the author found 17.8% without hereditary taint, 24.5% showing hereditary taint, 18.7% illegitimate, and 43.2% organically conditioned.—*W. Wirth* (Leipzig).

419. **Gerstmann, J.** *Fingeragnosie und isolierte Agraphie—ein neues Syndrom.* (*Finger-agnosia and isolated agraphia—a new syndrome.*) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1927, **108**, 152–177.—(From the psychiatric and neurological clinic of the University of Vienna.) Four cases showed finger-agnosia (impairment of the recognition, naming, exhibition, and selection of individual fingers) as a cardinal element in the objective clinical findings with simultaneous isolated or pure agraphia which was always accompanied by Henschen's acalculia (loss of the ability to calculate). These cases are similar to a case of Potzl and Hermann, as well as a new case of Hermann-Kerschner. It has never been asserted that these symptoms constitute a general syndrome. Where such a syndrome occurs it points to a general injury of a common mechanism in the parieto-occipital region.—*W. Wirth* (Leipzig).

420. **Gordon, H., Ostrander, J. M., & Counsell, S.** *The adrenalin glycemic curve as a diagnostic aid in psychiatry.* *Amer. J. Psychiat.*, 1927, **7**, 183–207.—In an investigation of the use of the adrenalin glycemic curve as a diagnostic aid in psychiatry, the writers find definite "group curves" in manic-depressive and dementia praecox cases free of somatic disease. In the manic-depressive psychoses, the curves show a relatively well-defined peak and delayed return of the blood sugar to the primary level. In dementia praecox cases the curves show more or less of a plateau, a less sharply defined peak and a less marked delay in returning to the fasting level. In a small series of cases with hepatic disease a distinctive blood sugar curve is found which tends to become flat and show a terminal rise. Similarly, in the endocrinopathies flat, rising curves are obtained. This test shows promise both as a means of confirming psychiatric diagnosis as between manic-depressive and schizophrenic cases, and as a method of determining the glycogenic function of the liver.—*B. Kendall* (Boston Psychopathic Hospital).

421. **Griesbach, H.** *Medizinisches Wörterbuch und Nachschlagebuch.* (Medical dictionary and reference book.) Giessen: Töpelmann, 1927. Rmk. 20.—This work consists of two parts. The first part (816 pages) contains 15,000 terms, the second (311 pages), biographical notes for 2230 investigators of different nations whose names are mentioned in the articles of the first part. The pages are two-column. The introduction to the first part is concerned with language. The individual articles, varying in length, cover the entire field of medical science with the consideration of numerous methods of investigation and of the instruments, apparatus and reactions used for them. Of psychological interest are, among others, the articles relating to nervous and muscular systems, sense organs, blood pressure, pulse, breathing, voice, language, and heredity. The references to the literature are designed to give an insight into original works in order to deepen the study of the material presented in the book. It is also likely that through the knowledge of the literature, the progress of investigation, the professional location and field of work of the investigators whose work is explained in the second part, the participation in historical and literary work will be furthered on the part of those interested.—*H. Griesbach* (Giessen).

422. **House, S. D.** *A mental hygiene inventory.* *Arch. Psychol.*, 1927, **14**, No. 88. Pp. 112.—The method of the investigation was to apply clerical, experimental, and statistical techniques to various so-called unselected normal and to various selected abnormal populations, with a view to devising a test that will, when applied to a group of students of collegiate status, discriminate crucially between the normals and the psychoneurotics. Eighty-seven of the 116 questions listed in Woodworth's Personal Data Sheet were retained and others added so that the revised questionnaire contained 223. A special group of 80 questions

was used for those under 14, the childhood period. These were given to college students and to declared psychoneurotics in a Veterans' Hospital. By employing the statistical technique of discriminatory ratios the questions for childhood were reduced to 30 and those for maturity to 70. Later these were reduced to 25 and 50 so that the final form contains 75 questions. As a result of the investigation there is available a scientifically reliable test that can be used in men's colleges to find out those whose maladjustments are sufficiently severe to require attention. In the period of childhood the frequencies for the normals are higher than for the psychoneurotics; the point of differentiation lies in the moderate responses. In the period of maturity, while the frequencies for the psychoneurotics are slightly higher than those for the normals in moderate responses, the average frequencies representing extreme symptom-responses are from $2\frac{1}{2}$ to almost 7 times as great among the psychoneurotics as among the normals. The proposition that organic adequacy may coexist with functional inadequacy is reaffirmed. No sharp lines of demarcation exist between unselected normals and the declared psychoneurotics. The normal curve of distribution is applicable to the abnormals. "The interpenetration of psychology and psychiatry is the outstanding fact in contemporary social science. The scientific methodology of psychology, coupled with the humanistic subject-matter of psychiatry, promises to make dynamic psychology the most significant, humanly, of the sciences." —*E. M. Achilles* (Columbia).

423. Kankeleit, —. Bericht über den II. allgemeinen ärztlichen Kongress für Psychotherapie in Bad Nauheim vom 27. bis 30. April 1927. (Report of the second general medical congress for psychotherapy in Bad Nauheim, April 27-30, 1927.) *Arch. f. Psychiat. u. Nervenkr.*, 1927, 81, 431-497.—W. Wirth (Leipzig).

424. Kant, O. Beiträge zur Paranoiaforschung. I. Die objektive Realitätsbedeutung des Wahnes. (Contributions to the study of paranoia. I. The objective reality of the delusion.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1927, 108, 625-644.—(From the University of Tübingen clinic for emotional and nervous affections.) The theory of Jasper that the delusion of the paranoic is to be understood psychologically, while that of the schizophrenia cannot be thus understood, is related to the theory of Adler that the tendency of the idea is the same as the tendency of the total personality, in so far as this idea is "a necessity of life for the structure of the personality at the time." Where, however, primitive impulses, as, e. g., hatred, are not added as supporting factors, the significance of reality, i. e., the practical working out of the delusion in contrast with the real environment, always remains a step behind the purely subjective experience of reality.—W. Wirth (Leipzig).

425. La Rue, D. W. Mental hygiene. New York: Macmillan, 1927. Pp. x + 443. \$2.20.—In this book the author presents his views on mental health, based on "several years' study and teaching of mental hygiene." Mental hygiene is defined as the science of happiness, since happiness is in general the sign of mental health. The author says: "It would hardly be sentimental to say that mental hygiene is the science and art that teaches us to take life with a smile;" and "Happy living requires that one shall (1) adjust himself well with the environment of things and people about him and (2) manage well the mind inside of him." The four chief problems of mental hygiene are dealt with in the four parts of the book. They are as follows: (1) general, the conditions underlying mental health and the chief causes of mental illness; (2) genetic, positive and negative eugenics; (3) personal, the satisfaction of desires, and the adjustment to life's difficulties; and (4) juvenile, the development of good traits of children and the elimination of bad ones. The author adopts the double aspect theory of the relation of consciousness and brain process; and makes frequent use of the terms phrenomenal trait and phrenomenal energy. Personal-

ity is described as an ensemble of phrenomenal traits. He also suggests the term "intelligents" to include all phrenomenal traits that are not "affects." He places special emphasis upon education and re-education for mental health, and upon the laws of readiness, exercise and effect in learning. He adopts McDougall's classification of the instincts. He gives fifteen concisely formulated rules for maintaining mental health, and also rules for dealing with various types of problem children. The book is written in simple language and a knowledge of psychology is not necessary for its understanding. It contains 29 chapters, and each chapter is preceded by an exercise, and followed by other exercises, questions for further study, topics for special investigation, and a bibliography.

—J. W. Bridges (McGill).

426. Lennox, W. G. **Studies of metabolism in epilepsy. II. The sugar content of the blood.** *Arch. Neur. & Psychiat.*, 1927, **18**, 383-394.—A study of 267 epileptic patients fails to show abnormality in the concentration of sugar in the blood or any direct relation between the blood sugar level and seizures. Increase of blood sugar during convulsions would seem to depend on the presence of available glucose in the body.—L. M. Hatfield (Boston Psychopathic Hospital).

427. Lennox, W. G. **Studies of metabolism in epilepsy. III. The blood sugar curve.** *Arch. Neur. & Psychiat.*, 1927, **18**, 395-413.—(1) Study of the carbohydrate metabolism in 140 epileptic patients has been made by means of 400 blood sugar curves. (2) Of the 140 initial curves 24% were abnormally high, 6% abnormally low, and 70% within the normal range. About 10% of the patients had high sugar curves which could not be accounted for by coincident disease conditions and which remained high on repeated examination. These patients probably represent potential diabetics. (3) A larger percentage showed marked variation in the form and level of successive sugar curves or abnormal fluctuations in the renal threshold for sugar. Possible causes of this instability of the sugar regulating mechanism are discussed. (4) The data collected gave no evidence of abnormality of carbohydrate metabolism that might in itself induce seizures.—L. M. Hatfield (Boston Psychopathic Hospital).

428. Luxenburger, H. **Tuberkulose als Todesursache in den Geschwisterschaften Schizophrener, Manisch-Depressiver und der Durchschnittsbevölkerung.** (Tuberculosis as a cause of death in the brothers and sisters of schizophrenics, of manic-depressives and in the average population.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1927, **109**, No. 1, 2. Pp. 313.—The investigation included 915 families. By means of several statistical and mathematical methods it was determined that the mentally normal brothers and sisters of schizophrenics died much more frequently of tuberculosis than either the children of the same parents in the general population or the brothers and sisters of manic-depressives. The figures for the manic-depressives are the same as those for the population as a whole. The lowered power of resistance in the brothers and sisters of the schizophrenics is certainly an inherited constitutional factor. There is probably a close genetic correlation between the disposition toward a disease in the cells of the ganglia and the sluggishness of reaction in the ectodermal supporting structures on the one hand, and the hereditary weakness of the mesodermal supporting structures on the other. The phenotypical result of this correlation is exhibited in the increased number of fatal cases of tuberculosis in those persons who are tainted with the schizophrenic hereditary disposition either as recessive homozygote or as heterozygote. A corresponding negative correlation between the lack of resistance against tuberculosis and the disposition toward manic-depressive insanity cannot be established.—H. Luxenburger.

429. Melrose, A. H., & Thomson, A. G. W. **Occupational therapy at the Glasgow Royal Hospital, Gartnavel.** *Occup. Therap. & Rehab.*, 1927, **6**, 375-394.—The occupational pavilion at the hospital was completed in 1923 in a very

fortunate location which gives little suggestion of hospital life. The tuition is individual, with no hard or fast curriculum. It is often a big effort for the patient to change from the ward to the new surroundings, so that the beginning must be cautious and involve very simple types of occupation. Later on the patient will develop interest in some specialty and perhaps even play the part of instructor to other patients, with resulting restoration of self-confidence. The finished work is displayed and this gratifies the maker and arouses some competition. Various case studies are cited. For instance, a farmer troubled by delusions found little improvement in doing gardening work because it reminded him of his former worries, but made rapid progress mentally when engaged in rug making. Some crafts prove too easy for a patient and fail to arouse interest for that reason. Interests are often conditioned by former associations and very frequently an occupation markedly at variance with the previous one will be most suitable. Music seems to help out unexpectedly with some of the most difficult cases. The socializing influence of the pavilion is very helpful to others. The effort is made to provide not a mere occupation, but some craft work that will stimulate and hold the patient's interest. In the last analysis, it is not so much what is being done as how it is being done.—H. E. Burtt (Ohio State).

430. Orlov, N. F. [Observations upon nervous diseases and upon conditions of work.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 639-648.—Diseases of the nervous system are twice as frequent in a certain group of workers as in the members of their families. While the latter have, for the most part, only functional nervous disorders, the workers themselves are affected with organic nervous diseases. Among iron workers, e.g., we find a great number of disorders of the peripheral nervous system, such as are produced by noxious heat and traumatic injuries. The large number of spasmophilies among workers must be explained as the result of hard conditions of labor, and Basedow's disease among women as a result of gonocoeal infection of the ovaries and the consequent disharmony of hormones. Among the etiological factors of the nervous diseases found in workers by the author there should be mentioned also chronic hunger, epidemics, disturbances of war and revolution, syphilis and unfavorable climatic conditions.—A. L. Shnirman (Leningrad).

431. Pastori, G. Contributo all'anatomia patologica dell' epiphysis cerebri (corpo pineale). (Contributions to the pathological anatomy of the epiphysis cerebri (pineal body).) *Pubbl. Univ. Cattol. Sacro Cuore, Milano*, (Serie II), 1926, 11, 7-57.—The author proved that the anatomical constitution of the pineal body resembles that of the nervous centers rather than that of the glands. An enlarged epiphysis may be due to the amount of epiphyseal tissue or to the presence of degenerative elements. In the former case microscopic examination reveals hyper-epiphysia. When, on the contrary, the organ is small, we have hypo-epiphysia. The endo-nuclear spherules have nothing to do with degeneration or with hypertrophy of the epiphysis, nor have they any secretory function. They have a characteristic and constant structure of their own. They are present in all subjects of the most varied ages and do not vary with the various morbid forms. The authoress found perfectly analogous spherules in the epiphyseal cells of some mammals, including a chimpanzee.—R. Schwarz (George Washington University).

432. Pearson, G. H. J. Spasmodic associated movements of the eyes. Can they be produced by syphilis? *Arch. Neur. & Psychiat.*, 1927, 18, 414-426.—A considerable number of cases are cited from the literature, and the report of one case is given in detail. The following conclusions are drawn: (1) Spasmodic associated movements of the eyes are a frequent symptom in the cases of postencephalitic parkinsonism seen at present. (2) This symptom is probably a release phenomenon due to degeneration of the controlling centers in

the neostriatum. (3) The same symptom perhaps may be due to other etiologic factors, but the reported cases are not conclusive. (4) The parkinsonian syndrome may occur in later life on a syphilitic basis and is distinguishable by the fact that there are signs denoting the involvement of other parts of the central nervous system which are not involved in idiopathic paralysis agitans. (5) It cannot be differentiated clinically from Lhermitte and McAlpine's pyramidopallidal syndrome. (6) No proved case has been reported of syphilitic parkinsonism occurring in the early half of life, all such cases really being caused by encephalitis, though the patient may have a concomitant syphilis. (7) There is no diagnostic sign whereby such cases, if they do occur, can be differentiated from those due to encephalitis.—*L. M. Hatfield* (Boston Psychopathic Hospital).

433. Peter, K., & Schlüter, K. Über Megalencephalie als Grundlage der Idiotie. (On megalencephaly as a basis for idiocy.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1927, 108, 21-40.—(From the anatomical section of the psychiatric University clinic of Hamburg-Friedrichsberg.) Histopathological study in the case of a child 3½ years old, dying after 2 years of clinical treatment, shows an internal lack of harmony in the brain construction. From this it is concluded that brains which enlarge in an harmonious manner can belong to persons of superior mental ability, and only the lack of harmony in the internal structure leads to idiocy.—*W. Wirth* (Leipzig).

434. Pfahl, T. Unwillkürliche Bewegungen, unwillkürliche Beschleunigungen und Hemmungen, ihr Nachweis durch das Experiment, ihre graphische Aufzeichnung, ihre Bedeutung für die Diagnose, die Begutachtung, die Behandlung usw. (Involuntary movements, involuntary accelerations and inhibitions, their proof by means of experiment, their graphic records, their significance for diagnosis, prognosis, treatment, etc.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1927, 109, 243.—The author considers as involuntary movements not convulsive movements due to irritation, but coordinated, purposive movements performed partly through emotion, partly through association, etc., and in addition the so-called relief or assistance movements arising through inheritance (phylogenetic) or developed in the individual (ontogenetic), which are for that reason difficult to inhibit. The author communicates 26 curves of movements of the hand in people in good health and in patients. These were secured experimentally with uniform methods and the same apparatus (four-fold magnification of the movement, written in ink and tested for many years). He shows that the curves, whose origins the observer has experienced and sees, can for that reason be easily understood and estimated by him, and are very individualistic. Thus they serve to moderate the restless, the over-mature and the spendthrift, to incite the timid, to convict opportunely the liar and criminal. Thus they give to the educator, the nerve specialist, physician and criminologist a valuable aid. The author also points out that in America similar but more complicated methods are used for the same purpose.—*T. Pfahl* (Bonn).

435. Révész, B. Zur Psychologie der Moral Insanity. (On the psychology of moral insanity.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1927, 108, 178-217.—The aim of the author is to follow the psychological roots of the symptoms of this well-known disease defined by Pritchard in 1835, thus "connecting the symptoms to a system, differentiating this from the normal, and showing the value of this study for normal psychology." Although the ideas in mental life do not entirely picture the means, yet the weak judgment, the losing of experience, and the life of uninhibited impulses point to the central significance of a defective ideational life for the entire disease picture, on which account one can speak directly of a "moral imbecility." Conceit and cowardice surely play a part in the loss of the sense of social danger.—*W. Wirth* (Leipzig).

436. Roffenstein, G. Einige grundsätzliche Bemerkungen zum Problem Psychopathologie und Gesellschaft. (Some fundamental observations on the

problem of psychopathology and society.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1927, 109, 228.—Every attempt to formulate some relation between pathology and society has first of all two questions to answer: (1) To what does the concept abnormal refer? (2) What is to be characterized as normal and as abnormal? In answer to the first question, abnormal may refer either to society as a whole or to individual persons as a whole or to specific psychic functions in particular individuals. The psychopathology of "society" as an entity is not accepted. The right to consider society from the pathological point of view exists only when one limits oneself to the consideration of some phenomena which in their internal consequences lead to that type of personality which is called pathological. Such a consideration would include affectability, loss of inhibitions, weakness of judgment, loss of reality in thought, etc. The statistical criterion is rejected for the concept of normality, and only functional proficiency is recognized. The thought processes are applied particularly to pathology from the political point of view.—*G. Roffenstein* (Vienna).

437. **Rosanoff, A. J. [Ed.] Manual of psychiatry.** (6th ed. revised.) New York: Wiley, 1927. Pp. xvi + 697. \$6.00.—When compared with the fifth edition it is found that the present edition has been liberally rewritten, the contents rearranged, and several chapters added. It is much enlarged. J. Harold Williams has been added to the list of contributors. The keynote of much of the change is given in a comparison of the introduction of the present edition and that of its predecessor. In the fifth edition the editor says that psychiatry deals with "insufficiency and perversion of the psychic faculties;" in the present edition he describes the field of psychiatry as that which "concerns itself with dysfunction of the patient as an integrated personality." The new chapters of interest deal with personality, mental disorders of children, and educational achievement tests. There are many other sections added to chapters. Much new material is incorporated in the discussions, mainly of psychiatric diagnostic interest. The plan of the present edition is as follows: Part 1, General psychiatry, dealing with etiology and symptomatology; Part 2, Special psychiatry, dealing with the forms of psychoses; Part 3, Practice of psychiatry, dealing with methods of examination, diagnostic procedures, and therapeutic measures; Part 4, Special diagnostic procedures, dealing with methods of mental tests, and examinations of aphasics; and appendices, in which are found useful tables, and a classification of mental diseases. The book as a whole is a conservative, up-to-date statement of psychiatric standpoints and procedures.—*S. I. Franz* (California at Los Angeles).

438. **Shargorodski, L. I. [On the symptomatology of multiple sclerosis.]** *Obozrenie psichiatrii, nevrologii i refleksologii* (Review of psychiatry, neurology and reflexology), 1926, No. 3, 192-202.—This describes a case of multiple sclerosis with a distinct and lasting astereognosis, a peculiar synkinesis and a rare combination of defensive reflexes.—*L. I. Shargorodski* (Leningrad).

439. **Syz, H. C. Observations on experimental convulsions with special reference to permeability changes.** *Amer. J. Psychiat.*, 1927, 7, 209-219.—Injury to the central nervous system of frogs performed within 10 to 40 minutes after—in a few cases several hours before—the injection of acid fuchsin into the dorsal lymph sac resulted in increasing the passage of the dye from the cerebral blood vessels into the nervous substance. The physiological results were marked tonic and clonic convulsions, and finally the death of the animal. In later series of experiments asphyxiation was produced by submerging the frogs in water, or in white oil, or by placing them in an atmosphere of nitrogen. The frogs reacted with convulsions within from 15 to 35 minutes after the supply of oxygen had been terminated. The findings in the central nervous system were practically identical with those observed after brain injury. The increase in permeability of the nervous structures seemed to result in (1) an increase of the effectiveness of the

convulsant agent and (2) a generally increased activity of the nervous elements themselves. Neither brain injury nor asphyxia, without the administration of convulsant substance, leads in frogs to convulsive manifestations. It is the combination of factors acting upon specific and different physiological part-functions which accelerates the same visible physiological end result. The effect of some of the vascular phenomena which are associated with the convulsive attack may be based on concomitant alterations in permeability. It may be that psychological and behavior situations also are related to permeability changes.—*B. Kendall* (Boston Psychopathic Hospital).

440. **Taft, A. E.** *Interpretation in neuropathology.* *J. Nerv. & Ment. Dis.*, 1927, 66, 217-226.—The general concept in neuropathology is a morphological one. Its limitations in the explanation of mental disease may be considered as an indication of the stage of development of the science. Physico-chemistry, which has become of great importance in other branches of medicine, has been applied to the study of brain pathology in the work of but a few investigators, notably that of Marinesco. Methods commended for study are the ultramicroscope and the chromatic reactions offered by living nerve cells treated with different dyes. The results of studies on living cells point out the importance of a careful interpretation of morphological findings as seen in fixed and stained specimens.—*E. N. Brush* (Boston Psychopathic Hospital).

441. **Toporkov, N. N.** [Enuresis nocturna; its etiology.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatel'nosti* (Bekhterev 40th anniversary commemorative volume), 1926, 393-406.—From studies of 321 patients with enuresis, the author came to the following conclusions: Nocturnal (and diurnal) enuresis is to be regarded as a manifestation of a neuropathic constitution. Patients suffering from nocturnal enuresis always exhibit "organic" symptoms (derangement of the pupillary reflex, of the tendon reflex, etc.). Very often dystrophies are found in these patients. The investigation of the enuretic commonly leads to the discovery of less conspicuous symptoms of syphilis. Investigation of the parents and the brothers and sisters often furnishes proof of syphilis in the entire family. Some cases suggest the idea that the source of the enuresis should be sought in lues of the third generation. The few cases of the specific treatment of the enuretic give favorable results. The enuresis appears not seldom as the earliest prognostic of more fundamental and more permanent neuropathic and psychopathic states (hysteria, psychasthenia, epilepsy, schizophrenia, etc.). The fact that enuresis nocturna belongs to the group of the neuropathies calls for a careful search for lues in every case of a neuropathic constitution (hysteria, psychasthenia, stuttering etc.).—*A. L. Shnirman* (Leningrad).

442. **Toporkov, N. N., & Shostakevich, V. V.** [On the heritable psychopathic tendency of the mentally normal.] *Obozrenie psichiatrii, nevrologii i refleksologii* (Review of psychiatry, neurology and reflexology), 1926, No. 3, 171-179.—The authors examine critically the results of other writers upon the question of heredity in the mentally diseased and the normal. They find the results open to objection because the persons studied were not old enough to have reached the age in which mental diseases may arise. For this reason, the authors investigated the direct psychopathic tendency in mentally normal persons at the age of 60 and above. The age of the parents of the subjects also was at least 60 years. It was then found, in a study of 251 individuals, that the normal persons were hereditarily psychopathically tainted in only 0.39% of the cases. Since Sholomovich showed that the direct heritable psychopathic tendency of the mentally diseased is about 14.9%, this is 38.2 times as great as that of the mentally normal.—*N. N. Toporkov* (Irkutsk).

443. **Treves, M.** *La psychoanalyse dans l'épilepsie.* (Psychoanalysis in

epilepsy.) *Riv. sper. fren.*, 1927, No. 1.—Treves applied the psychoanalytic method to the study of those convulsive attacks which, while exhibiting the clinical characteristics of epilepsy, presented at the same time a certain varying peculiarity in movement. By questioning the patient immediately following an attack, and sometimes also during such an attack, i. e., during the state of "crepuseular" consciousness, the patient gave indirectly the reasons for these movements, revealing also the remote cause to which they were attached—reasons which remained obscure to the patient in the sleeping state. In this manner, with a group of 150 epileptics at the asylum at Collegno, observations of the atypical convulsive movements and interrogation during post-paroxysmal confused states revealed the existence of an early psychic traumatism as the cause of the abnormal behavior.—*G. C. Ferrari* (Bologna).

444. von Domarus, E. *Zur Theorie des schizophrenen Denkens*. (On the theory of schizophrenic thought.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1927, 108, 703-714.—(From the psychiatric and neurological clinic of the University of Bonn.) The author admits that the material and formal disturbances in the thought of the schizophrenic are specific, but maintains that they do not on this account necessarily lie outside the field of psychological "understanding," but that they show a close relationship to primitive phylogenetic and ontogenetic errors in thought, with the customary logical classification of which the author attempts to show many parallels.—*W. Wirth* (Leipzig).

445. Walter, G. *Zur innerpsychischen Struktur der Schizophrenie*. (On the internal psychic structure of schizophrenia.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1927, 108, 56-85.—The author, who is not a physician, seeks to reduce the nature of schizophrenia to the psychological scheme of structure of Alexander Pfänder (*Zur Psychologie der Gesinnung* and *Grundprobleme der Charakterologie*). Of the three strata "ego center," "self," and "basic being," it appears that in this disease the first has lost its predominant function as ruler of the total psychic personality. It is upon this loss that the impression of mental decay rests, and also from this loss the author attempts to derive at least a part of the symptoms.—*W. Wirth* (Leipzig).

446. White, W. A. *The narrowing of the gap between the functional and the organic*. *Amer. J. Psychiat.*, 1927, 7, 221-229.—In the realm of the neuroses and psychoses many elaborate studies of function or behavior have been made, which say not a word about structure, real or hypothetical; but it is obvious that, whatever the function may be, it can manifest itself only by means of existing structures. Wernicke at the close of the last century suggested that the psychoses might one day be understood from the standpoint of their organic background by starting with the study of aphasia. Head in his work upon this subject recognized the desirability of narrowing the gap between the functional and organic, and his method is one of parallel advancement in knowledge of both. Notable advances have been made in the knowledge of the phylogenetic development of the nervous system and in the interpretation of its structure in terms of the history of past strivings that have left their traces in organic make-up. Correlations noted by Kretschmer between body type and mind type and by Crookshank between bodily postures of the anthropoid apes and those of the Mongolian idiot and of the dementia praecox patient make for a further narrowing of the gap. The anxiety and irritability of the hyperthyroid or the placidity of the cretin are interpreted in terms of thyroid secretion, and nomadism is believed to be determined by germ plasm. While analytically mind and body are more clearly differentiated than ever before, still synthetically they are seen to be but different aspects of the same integrated whole.—*B. Kendall* (Boston Psychopathic Hospital).

447. Winkelman, N. W. *Metastatic carcinoma of the central nervous sys-*

tem. *J. Nerv. & Ment. Dis.*, 1927, **66**, 133-148.—From an analysis of twenty-three cases of cancer metastasizing to the central nervous system the following conclusions are drawn: (1) Certain organs have a predilection for sending their cancers to the nervous system. The breast and prostate are notorious offenders. (2) The metastasis may occur at any time, even years after the appearance or operation on the primary tumor. (3) There is no characteristic group of symptoms by which metastatic tumor to the central nervous system is to be diagnosed. The history of a primary tumor, particularly in the breast or prostate, is of great importance.—*E. N. Brush* (Boston Psychopathic Hospital).

[See also abstracts 327, 331, 353, 356, 380, 387, 391, 395, 448, 451, 459.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

448. Anuchin, V. I. [The causes of the dying out of the population of northern Siberia.] *Sbornik, posvyashennyi V. M. Bekhterevu k 40-letnyu professorskoi deyatelnosti* (Bekhterev 40th anniversary commemorative volume), 1926, 649-662.—The specific physical-geographical conditions in northern Siberia include a constantly active factor which exerts a destructive influence upon the human nervous system. As a result of this action there arise massive nervous disturbances which derange the organism and thereby lead to degeneration and finally to extinction. The many other socially injurious factors play only a subordinate rôle, developing upon the ground already prepared by the nervous disturbances. Neither favorable cultural or material conditions nor social arrangements, be they ever so ideal, can prevent the gradual dying out of the population of northern Siberia. The fundamental cause of the extinction lies in the nervous derangement (hysteria).—*A. L. Shnirman* (Leningrad).

449. Bodkin, M. Literary criticism and the study of the unconscious. *Monist*, 1927, **37**, 445-469.—In this paper the author attempts to show the relation between forms of art and the dream. The character common to the dream and the poem is the appearance of figures acting spontaneously. The close relationship between the experiences of the artist, poet, and dramatist, and their work is shown by examples from Goethe and Ibsen. It is only through an understanding of the minds of artists, and the interpretation of their symbolic figures, that we are enabled to enjoy the finished product.—*C. M. Diserens* (Cincinnati).

450. Bowen, W. P., & Mitchell, E. D. The practice of organized play. (Rev. and enlarged.) New York: Barnes, 1927. Pp. 238. \$2.00.—This is a textbook designed to acquaint students with the play system as a whole rather than a particular scheme. The first five chapters are devoted to simple imitation, story and rhythmic plays and contests between individuals, e.g., track events, and between groups, e.g., tug-of-war. The next five chapters are devoted to physical tests, contests resembling games, e.g., quoits, goal games, tag games and games of personal combat, e.g., boxing. The next five chapters are given to team games of the baseball, tennis, football, hockey and basket ball types. The last chapter is concerned with plays for special occasions, e.g., charades, handicraft, story telling etc. A complete play bibliography is given at the end. An appendix is added giving the administrative rules and regulations of the department of recreation for Detroit, group dances for social recreation and suggestions for social gatherings for old and young.—*R. Stone* (Clark).

451. Bugaiski, I. [The clinic and the psychopathology of hooliganism in relation to the determinism of the behavior of the mentally diseased.] *Obozrenie psichiatrii, nevrologii i refleksologii* (Review of psychiatry, neurology and

reflexology), 1927, No. 1-2, 57-68.—From a study of 117 cases of hooliganism in mentally abnormal persons examined at the Institute of Legal Psychiatry, the author comes to the conclusion that hooliganism should be regarded as an infantile reaction. The play elements which are manifest in the hooligans are said to be due to hysterical mechanisms. Vesania with aggressiveness occurs often in persons with epileptoid tendencies.—*A. L. Shnirman* (Leningrad).

452. **Carter, H.** *The social theories of L. T. Hobhouse.* Chapel Hill: Univ. North Carolina Press, 1927. Pp. 137. \$1.50.—An endeavor is made to digest the many writings of Hobhouse (of which a comprehensive bibliography is given) with special reference to the elucidation of his sociological concepts. Hobhouse's starting point is philosophic, but he employs whatever methods are at hand (such, for instance, as experimentation on the animal mind) to throw light upon the problem of the place of mind in the evolution of species, which is for him a central one. In psychology he is "a cautious introspectionist," and follows McDougall's instinct theories; his approach is rather intellectualistic than otherwise, though he admits emotion to the place of an integral part of reason, and in places seems to admit some validity in the psychoanalytic findings.—*R. R. Willoughby* (Clark).

453. **Densmore, F.** *The study of Indian music in the nineteenth century.* Amer. Anthropol., 1927, 29, 77-86.—Miss Densmore offers a history of the study of American Indian music. The achievement and conflicting viewpoints of pioneer students such as Fillmore and Gilman, as well as improvements in method of record transcription and analysis of Indian music, are noted.—*C. M. Diserens* (Cincinnati).

454. **Freeman, A. E.** *The nature of coherence in aesthetics.* Monist, 1927, 37, 256-268.—Art is a means of quickly and easily introducing coherence and order into the natural chaos of human experience. It is not a substitute for philosophy and science, but an addition necessitated by the limitations of knowledge, power, and time. Coherence is that which gives to the artist an immediate perception of the mutual interdependence of the parts of his composition, without reference to the past or future, or to causal connections and scientific laws. It involves immediacy of experience, completeness due to the felt interdependence of elements, and imagination, based on adequate use of accumulated sensory data of the subject of aesthetic experience.—*C. M. Diserens* (Cincinnati).

455. **Garth, T. A.** *A comparison of mental abilities of nomadic and sedentary Indians on a basis of education.* Amer. Anthropol., 1927, 29, 206-213.—A nomadic group of 215 plains Indians and a sedentary group of 238 plateau Indians, all full-bloods, and of varying educational attainment, were compared by means of group tests from Pyle and Pintner. The opposites, part-whole, genus-species, free association, logical and rote memory, concrete and abstract, and word building tests were used. In tests of higher mental processes, the nomadic group excelled by 35%. The groups are more alike in memory tests and less alike in performance and ingenuity tests, the differences decreasing with degree of education. Great variability occurs. 67.3% of the sedentary group fell below the nomadic median performance.—*C. M. Diserens* (Cincinnati).

456. **Gifford, E. W.** *Southern Maidu religious ceremonies.* Amer. Anthropol., 1927, 29, 214-257.—This is a study of the god-impersonating cult of southern California. The origin, diffusion, stratification, motives, and climatic determinants of ceremonial dances, as well as associated taboos, paraphernalia, relation to dreams, etc., are given in detail. Three strata of dances, one indigenous and two imported, are indicated. The latest ascribed to a definite historical personage are traceable to the ghost dance religion. Associated shamanistic activities include initiation of youths as shamans, shamans' contests and spirit séances. The cult seems to be an outgrowth of shamanism. Spirits of several

classes are impersonated and ceremonial suggestions often come from dreams. No true secret society exists in connection with the cult.—*C. M. Diserens* (Cincinnati).

457. **Goddard, P. E.** Facts and theories concerning Pleistocene man in America. *Amer. Anthropol.*, 1927, **29**, 255-261.—The existence of Pleistocene man in North America is no longer open to doubt, since recent archaeological evidences combine with linguistic and other cultural evidence already sufficient to prove the point. The degree of linguistic differentiation would alone require a vast antiquity to explain it. Objections to the antiquity of man in America are based on the false assumptions that skeletal remains found are not of a low type and that man in America must have a Neolithic horizon, which in France was post-glacial but was not necessarily so in other centers of cultural development.—*C. M. Diserens* (Cincinnati).

458. **Howerth, I. W.** The first principle of social evolution. *Mönist*, 1927, **37**, 183-198.—In order to understand the social changes that are unwillingly by man, a knowledge of the natural social principles involved is necessary as the first approach to the conscious control of social destiny. Howerth then traces the evolution of the inorganic elements through the origin of life and the origin of mind. After mind has developed, social evolution progresses through the beginnings of social groups. As in chemistry, groups are compounded from elements and form a chemical affinity, so social units can be combined to produce a social affinity. It is no longer necessary in order to have immediate contact to have social combination and evolution, for it is the ideas embodied that affect a combination of groups to-day.—*C. M. Diserens* (Cincinnati).

459. **Hrdlicka, A.** Anthropology and medicine. *Amer. J. Phys. Anthropol.*, 1927, **10**, 1-9.—In this article the author shows the intimate connections of physical anthropology and medicine. Anthropology is essentially advanced, comparative human anatomy, physiology, and pathology, and through its researches is capable of throwing light upon many of the basic problems of medicine. This is well recognized in Europe, where in many places anthropology forms an inherent part of the medical education. It is also coming to be recognized more and more in this country, and anthropological instruction is already given to the medical student in a number of the more important medical colleges. The understanding of human morbidity is helped much by a closer understanding of human evolution and variation. The etiology of abnormalities and disease is, in fact, often rooted deep in the man's past and connected with his evolution from lower forms.—*A. Hrdlicka* (Smithsonian Institution). (Courtesy of the Wistar Bibliographic Service.)

460. **Jones, R. M.** New studies in mystical religion. New York: Macmillan, 1927. Pp. 205. \$1.75.—These studies comprise a sympathetic examination of the mystical nature of religious experience. Lack of objectivity, in the opinion of the author, is not a characteristic peculiar to religion, for "there is no way of proving that our unmediated sensations of color, of sound, of odor, of taste, of roughness or smoothness or hardness, stand for objective realities precisely like our subjective experience of them." Furthermore, "the method of psychological diagnosis, which is believed to destroy the objective validity of mystical experience, would also destroy all objective validity in every field of experience." In a chapter on mystical religion and the abnormal there is a lengthy refutation of the claim that mysticism is a symptom of abnormality. Subsequent discussions are concerned with mysticism as related to asceticism, to religious education, to the organization of thought and knowledge, and to religious experience. A concluding chapter deals with the testimony of the soul.—*N. L. Munn* (Clark).

461. **Kainz, F.** Gestaltgesetzlichkeit und Ornamententstehung. (The laws of *Gestalt* and the origin of ornamentation.) *Zsch. f. angew. Psychol.*, 1927, **28**,

267-327.—The author reviews the various theories concerning the origin of art, and shows the confusion which exists at present in the explanation of prehistoric art forms. On the one side there has been the view that primitive ornament developed from imitation of objects into geometrical forms, while on the other there has been the view that the geometrical are the more primitive forms. Neither view has been able to muster sound argument in its favor. Now, however, *Gestalt* psychology lends its support to the latter, and shows that primitive ornamentation is the direct outcome of an elementary *Gestalt* disposition in the human soul, an original attraction toward simple and precise space arrangements, a primary need for good forms. Illustrations are given to demonstrate how simple it is to interpret primitive art in these terms.—*A. T. Poffenberger* (Columbia).

462. **Kroeber, A. L.** *Disposal of the dead.* *Amer. Anthropol.*, 1927, 29, 308-315.—Variety and change in mortuary customs are common in many parts of the world. Examples cited demonstrate this fluctuation instead of the relative stability generally assumed and ascribed to the powerful affects released by death. It follows that intensity of feeling regarding any institution is a poor criterion of its permanence. Emotion attaches but secondarily to social behavior. Rationalization is no index to the reality of its supposed motivation. Emotion adheres to but does not cause practice. The actual motivation of mortuary practices is unrelated to behavior connected with primary social necessities, but is allied to that involved in such secondary activities as fashion and etiquette.—*C. M. Diserens* (Cincinnati).

463. **Lalo, Ch.** *Etude critique: la "Psychologie de l'art" de H. Delacroix.* (Critical study: the "Psychology of art" of H. Delacroix.) *J. de Psychol.*, 1927, 24, 169-183.—H. Delacroix's psychology of art consists of two parts: (1) general aesthetics, (2) aesthetics of specific arts. In Part I, a distinction is made between art and play, the former being defined as a more comprehensive activity. Art is an animation of the universe, but not in the sense of vitalism or the theories of empathy, romanticism, imitation, or the contemplation of ideas. Art is liberation through constructiveness, and thus a kind of animation. Beauty is not reproduction of nature but excellence in artifice. Art is also an achievement of harmony. There are four types of artistic contemplation, of which the extremes are (1) affective and motor suggestion type, and (2) the sensorial, rational objective type. Art develops toward subjectivity. Art is a special form of reality, a world of values. In analysis the artist cannot be separated from his work. Inspiration is a function of epoch, social environment, temperament, and vocabulary. All mental syntheses are creative and art evokes the subconscious. The section on special aesthetics stresses the specificity of each art. Music and rhythm are treated in detail. The *Gestalt* psychology is recommended for the analysis of musical forms, the comprehension of which constitutes musical thought. The chapter on varieties of musical experience offers a new analysis of amusia and notes the relationship of musical and religious ecstasy. Poetry is a very complex art and evolves from a musical to an intellectual form. Delacroix's final summary is that "Art is construction and harmony." Lalo notes the erudition and synthetic power of the author, but adds that his work presupposes an acceptable aesthetics or must rest upon a sociology of art which remains to be written.—*C. M. Diserens* (Cincinnati).

464. **Landry, L.** *La psychologie du cinéma.* (The psychology of the moving picture.) *J. de Psychol.*, 1927, 24, 134-145.—The author describes the essential psychological basis, historical origins, mechanical limitations, and undeveloped possibilities of moving pictures. Artistic activities organized in time involve an emotive dynamism, the conditions of which may be studied in poetry, literature, drama, and music. A study of music is the best introduction to an

analysis of cinema effects, since music, like the cinema, presents objectively four dimensions (velocity, continuity, simultaneity and intensity) which have their analogues in the cinema. Progress in the cinematographic art depends on manipulation of these elements. The results of the cinema are a confusion of emotion and act in the spectator tending to produce a kind of animism and return to primitive mentality. The development of genuine cinema art is retarded by absence of traditions and commercialism.—*C. M. Diserens* (Cincinnati).

465. **Leroux, E.** *The philosophy of religion in French speaking countries from 1914 to 1925.* *Monist*, 1927, 37, 24-49.—Recent French studies which lead to an interpretation of religious phenomena as a whole or in part, include studies (1) according to the dialectical method (Lagneau and Chartier), (2) in religious sociology (Herz, Couchoud, Loisy, Oltramare), (3) in religious psychology (Delaeroix, Montmorand), and (4) historical and biographical studies (Bremond, Boullage, Houtin). The most recent period has produced fewer original works than the preceding quarter century, possibly due to the mass of materials accumulated, which makes synthetic utilization difficult. It is a period of preparation for new syntheses, particularly from the sociological standpoint. Irreconcilable differences still exist, and conditions point to the necessity for a continued cooperation between empirical method and metaphysics.—*C. M. Diserens* (Cincinnati).

466. **Leuba, J. H.** *Die Psychologie der religiösen Mystik.* (The psychology of religious mysticism.) (Trans. by E. Pfohl-Hamburg.) *Grenzfr. d. Nerv.-u. Seelenlebens*, 1927, Heft 128-130. Pp. 260.—*R. R. Willoughby* (Clark).

467. **Luquet, G. H.** *La critique de la raison pratique chez les Yagans de la Terre de Feu.* (The critique of practical reason in the Yagans of Tierra del Fuego.) *J. de Psychol.*, 1927, 24, 189-202.—A review of the didactic myths and moral precepts based on the recent work of W. Koppers reveals a theory of morals similar to that of Kant. The foundation of ethics is a personal sense of duty, the concept that a particular type of conduct is that of a good man. It is conduct based on the wisdom and practice of generations. Its prescriptions take the form of a hypothetical imperative to act according to a universal rule. The ethics of the Yagan also resemble Kant's in respect to the nature of moral sanction. The letter is personal and individual, never social, corresponding to the anarchic political regime of the tribe. The Yagans conceive of souls, but, claiming no knowledge of their ultimate fate, do not rely on posthumous moral sanctions. Terrestrial life, however, involves the interference of divine powers, so that individual conduct is necessarily conditioned by their attitudes, while remaining a matter of purely personal duty. A survey of Yagan moral conceptions offers data for what may be called the psychology of philosophy, pointing to the primarily affective origin of advanced philosophical doctrines.—*C. M. Diserens* (Cincinnati).

468. **Lutz, H. F.** *The Sumerian and anthropology.* *Amer. Anthropol.*, 1927, 29, 202-209.—The Sumerians had a genuine cultural anthropology, and anticipated the *Dreistufen* schema of modern economic historians. Excellently situated to observe primitive conditions, they supplemented observation with speculation. Enkidu and Gilgamesh represent pre-Sumerian hunter types. The creation myths figure successive epochs of human culture. The parallelism of progress and intensified economic struggle and the rôle of woman in the genesis of agriculture were recognized. Semitic influences abolished the original anthropological standpoint and investigations ended by becoming theological.—*C. M. Diserens* (Cincinnati).

469. **Macleod, W. C.** *Trade restrictions in early society.* *Amer. Anthropol.*, 1927, 29, 271-278.—A number of facts cited from the early history of the Iroquois, Hurons, and northwest coast Indians, indicate that the intergroup struggles

of Stone Age North America were, to some extent, more or less pacific struggles for markets. There was the consequent tendency toward war, resulting in commercial exploitation of the weak by the strong.—*C. M. Diserens* (Cincinnati).

470. **Massignon, L.** *Documents de psychologie différentielle musulmane*. (Documents in Moslem differential psychology.) *J. de Psychol.*, 1927, 24, 163-167.—The writer analyzes a number of Moslem documents classified as (1) didactic texts, (2) translations of foreign works on religious meditation, and (3) oral confessions, the object being to discover the common cultural characteristics of Islam. The consistent use of technical terms and the superiority of oral confessions for this type of study are noted.—*C. M. Diserens* (Cincinnati).

471. **Masson-Oursel, P.** *Les techniques orientales de la concentration*. (Oriental techniques of concentration.) *J. de Psychol.*, 1927, 24, 87-92.—There is much confusion as to the nature of mystical experience, due to (1) syneratism, (2) the intrinsic nature of the mystic effort, (3) our ignorance of mystic states. The present study attempts to establish distinctions and classifications relative to Asiatic mysticism. Several types and motives of concentration are described: (1) Merging in absolute being as realization of cosmic law or absorption in God as an attitude of devotion. (2) The effort to acquire mastery of vital forces, imperialistic asceticism or pneumatic biology or psychology. (3) Effort at deliverance from transmigration, through knowledge and meditation; this is meta-pragmatism allied to Yogan efforts to extirpate egoism, ending in a metaphysics of vacuity. (4) Concentration as a metaphysical utilization of introspection; the object is self-isolation. Oriental methods of concentration differ widely from occidental procedures, such as the neo-Platonic conversion and the attention of modern psychology. Asiatic philosophy was never a "contemplation"; no Oriental ever taught that to know is to contemplate ideas. Asia is but moderately interested in the science of phenomena.—*C. M. Diserens* (Cincinnati).

472. **McDougall, W.** *Janus: the conquest of war*. New York: Dutton, 1927. Pp. xiii + 159. \$1.00.—The author recounts the major and minor causes of war. Among the former are listed armaments with the resultant fear of armed aggression, increase of population, the spirit of nationality, while the latter includes armament makers, certain financial and business groups, holders of official and semi-official positions, and the natural pugnacity of man. A critical appraisal is made of the more serious proposals and attempts to prevent war. The principle of placing an international police force back of the International Court of Justice forms the main thesis of the book. It is pointed out that "the march of science has put into our hands just such an instrument as International Justice needs for its police work, for the prevention of aggression and the redress of international wrongs." This is "a comparatively small international air force, stationed at a few well chosen centers" to back up the decrees of a competent world court. "Such an international air force might, then, well lead to general abandonment of national armaments and might initiate an era of universal peace."—*L. W. Kline* (Skidmore).

473. **Price, M. T.** *Christian missions and oriental civilizations; a study in culture contact*. Privately printed in Shanghai; obtainable from Orientalia, New York; Christian Century Press, Chicago; G. E. Stechert, New York, London, Paris and Leipzig; Maruzen-Kabushiki-Kaisha, Tokyo; G. A. Natesan, Madras; 1924. Pp. xxvi + 578.—The missionary enterprise is here discussed from the point of view of social psychology, as indicated by the sub-title of the book: "the reactions of non-Christian peoples to Protestant missions from the standpoint of individual and group behavior; outline, materials, problems, and tentative interpretations." Discussions and illustrations are organized under the following chapter headings: I. How non-Christians react to missions. II. The influence of the native group. III. First impulsive reactions. IV. Those

rejecting Christianity. V-VI. Plausible reasons for rejection. VII-VIII. Examination of actual causes. IX-X. Analysis of favorable reactions in terms of motivation. XI-XIII. Deciding for group candidacy. XIV. The propagandic impact as a whole. Extracts from accounts of missionaries and converts are profusely given. The book contains a "detailed syllabus of contents," an appendix on "psycho-sociological analysis," one on "motivation and causal sequence," a bibliography of 16 pages, and an index.—E. Shen (China Institute).

474. Spier, L. **The association test as a method of defining religious concepts.** *Amer. Anthropol.*, 1927, 29, 267-270.—Religious concepts among primitives are vague, and in some cases association tests may aid in their discovery, the religion of a people being assumed to be "the sum of all the beliefs held by every one of them." A list of 45 words including scattered references to religious matters is here applied to a member of the Havasupai of Arizona. Most of the responses are purely verbal, but the method might work if tried on a large scale.—C. M. Diserens (Cincinnati).

475. Sprwols, J. W. **Social psychology interpreted.** Baltimore: Williams & Wilkins, 1927. Pp. xii + 268. \$4.00.—Realizing that social psychology is characterized by an indefiniteness of both subject matter and method unknown in any other branch of science, the author of this volume attempts to supply a survey of the leading problems that have engaged the attention of students in the field. It may be, the author thinks, that in time the present subject matter will be studied under two divisions of science: (1) group psychology, which studies individuals and aggregates in reference to culture, and (2) social psychology, which studies individuals and aggregates in reference to different periods during which social progress is going on. Beginning with Hegel and Comte with their conception of a spiritual principle directing human destinies, the development of social psychology is traced to its present status with its basis in objective biology. Different interpretations of phenomena have led to the various schools of social psychology. As the outstanding problems upon which these schools have differed the author treats of instinct, social forces, group mind theories, social organization, culture, the conflict of cultures, social movement and the psychology of interaction. Throughout the discussion of these topics emphasis is placed upon the modern conception of social psychology in dynamic rather than in static terms. On the question of instinct, for instance, the author points out that the modern tendency is to do away with the static concept of instinct and to treat of the more dynamic concepts of conditioned reflex, habit and stimulus and response. Because of the indefiniteness of the subject matter of social psychology, the methods of the science are also in a state of confusion. A brief discussion shows the values and the inadequacies of the natural history method and the historical method, while Znaniecki's mediating position is viewed as perhaps more satisfactory than either. The statistical method is very widely used; "the truth is, there could be no scientific method in the modern sense without statistics." The purpose of a chapter on the laws of social psychology is "to survey historic attempts at law determination and from this survey to indicate so far as possible what future attempts having the same purpose may yield," the conclusion being: "The laws of the social psychology of the future will then be laws of human action as directed by human thinking. Both the acting (behaving) and the thinking may be studied as reaction patterns that originate in the course of adjustment to stimulus patterns, and which by virtue of the latter's repeated presentation, contribute to the formation of habits." A summary chapter on "Conclusions and interpretations" and a bibliography of some 250 titles conclude the volume.—L. M. Harden (Clark).

476. Stok, W. **Nähe und Ferne in den sozialen Beziehungen.** (Approach and withdrawal in social relations.) *Zsch. f. angew. Psychol.*, 1927, 28, 235-266.

—The author considers the elemental social relations to be the processes of approach and withdrawal. As soon as two individuals have passed the mere contact-stage of recognition, they assume a definite *attitude* toward each other. Analysis of acquaintances and intimates indicates that the *intensity of connection* rises with approach and falls with withdrawal. With increasing intensity of connection the individual feels himself less as an isolated person and more as a partner. Decreasing intensity results from: (1) convention, which automatizes social intercourse; (2) impersonal transactions with officials and authorities in which the position obscures the man; (3) unfavorable milieu (contrast the differences between persons meeting in a big city and in a mountain solitude); and (4) mutual discovery of contradictory values. Intensity of connection is a graded concept which measures the extent to which the partners are activated and the degree in which they understand each other. Understanding involves both a cognition of a person's characteristics and an accepting tolerance thereof. Two persons stand more closely together the better they can feel themselves into each other, the more thoroughly they know each other. A sympathetic attitude, therefore, acts as a catalyst promoting the process of approach. In any phase of approach and withdrawal the significant determinants of attitude are the intensity of connection and the amount of reciprocal understanding.—*A. T. Poffenberger* (Columbia).

477. **Strong, W. D.** *An analysis of southwestern society.* *Amer. Anthropol.*, 1927, **29**, 1–61.—This is a study of the historical relationships and social organization of the native peoples of the southwestern United States. The distribution of such social elements as tribe, phratry, clan, the concept of lineage, chieftainship and the religious complexes connected with the group, house, fetich, and priest are examined and their probable sources in earlier Pueblo culture are indicated. The religious complexes seem fundamental in shaping political organization of these tribes.—*C. M. Diserens* (Cincinnati).

478. **Suk, V.** *Anthropological and physiological observations on the negroes of Natal and Zululand.* *Amer. J. Phys. Anthropol.*, 1927, **10**, 31–64.—The paper presents the results of anthropological observations and certain physiological tests on a large number of children and adults of the negroes of Natal and Zululand. The observations cover all the features of the body and bring interesting results on many of the parts. The physiological tests extend to pulse, respiration, temperature, and muscular force. In general, all of these are fairly close to those of the European and follow the same laws; nevertheless, there are significant differences. An evidence of a correlation of intelligence and muscular force is presented.—*V. Suk* (Masaryk University, Brno, Czechoslovakia). (Courtesy of the Wistar Bibliographic Service.)

479. **van Gennep, A.** *La Saint Jean dans les croyances et coutumes populaires de la Savoie.* (The festival of St. Jean in the popular beliefs and customs of Savoy.) *J. de Psychol.*, 1927, **24**, 26–77.—*C. M. Diserens* (Cincinnati).

480. **Waterman, T. T.** *The architecture of the American Indians.* *Amer. Anthropol.*, 1927, **29**, 210–230.—A study of the evolution of the aesthetic taste of the American Indians, based on a survey of building arts. The author presents a map of the hypothetical distribution of architectural types and finds the source of the Indian's architectural ideas in an autonomous development free from Old World influences.—*C. M. Diserens* (Cincinnati).

481. **Whitmore, C. E.** *The autonomy of aesthetics.* *Monist*, 1927, **37**, 238–255.—The present status of aesthetics is unsatisfactory. It is too often subordinated to some general system of philosophy. Aesthetics must prove that it possesses a range of facts peculiar to itself, and a definite way of dealing with them. The general acceptance that beauty exists meets the first requirement, while recognition of the complexity of the field, and a judicious combination of

psychological and historical methods, satisfy the second demand. History will furnish accessible data which may be treated in terms of cycles, while the psychological device of analysis of aesthetic situations in terms of triads, e.g., artist, work of art, and recipient, affords a convenient method of exposition. An autonomous aesthetics seems possible on these lines.—*C. M. Discrens* (Cincinnati).

482. **Witty, P. A., & Decker, A. I.** *A comparative study of the educational attainment of negro and white children.* *J. Educ. Psychol.*, 1927, 18, 497-500.—The Stanford Achievement Test was given to 1725 white and 220 negro children between the ages of 7 and 13 inclusive. The white children were ahead on all tests. Only 14½% of negroes reached or exceeded the median white. The differences were least at seven years of age and increased up to thirteen years when the difference was 27 educational months. The greatest differences were in reading and language, the least in history and literature.—*A. M. Jordan* (North Carolina).

[See also abstracts 291, 345, 352, 366, 368, 370, 381, 384, 389, 407, 436, 492, 494, 495, 506.]

INDUSTRIAL AND PERSONNEL PROBLEMS

483. **Bureau of Public Personnel Administration Staff.** *Tests for junior personnel examiner.* *Pub. Person. Stud.*, 1927, 10, 218-226.—In view of the desirability of including on public personnel agency staffs at least one examiner trained in statistical and psychological test technique, proposal is made of tests, as yet unstandardized, for selecting such individuals capable of preparing, applying, and interpreting results of standardized short-answer type tests. Short-answer material and practical problems are suggested to cover the fields of ability and information in (1) test construction, analysis and evaluation, (2) testing situations, (3) social intelligence, (4) statistical calculations, and (5) actual sample preparation of test material. Education and employment records as well as an interview to determine certain personal traits are advised. Sample test items are given in an appendix.—*K. M. Cowdery* (Stanford).

484. **Craig, D. R.** *Measuring morale and leadership ability.* *Person. J.*, 1927, 6, 155-160.—The measurement of industrial morale and leadership is a single problem. From an examination of seven possible measures of morale, the conclusion is drawn that "the least unsatisfactory measures which can be found are the per capita productivity, the quality of work, and the labor stability." Possible ways in which these measures may be employed are briefly considered.—*A. W. Kornhauser* (Chicago).

485. **Savage, H. J.** *Information and data regarding tests previously published—automobile driver.* *Pub. Person. Stud.*, 1927, 10, 226-227.—From experience with examinations of drivers for city cars in Cleveland, standards of vision necessary for public safety are indicated. Advice as to corrective treatment is included as an integral phase of the examining.—*K. M. Cowdery* (Stanford).

[See also abstracts 430, 510, 518.]

CHILDHOOD AND ADOLESCENCE

486. **Beretta, M.** *I testi di associazioni preferite come mezzo diagnostico di insufficienza mentale nei fanciulli anormali.* (Preferred association tests as a

means of diagnosing mental insufficiency in abnormal children.) *Pubbl. Univ. Cattol. Sacro Cuore, Milano*, (Serie I), 1925, 1, 165-200.—The correlation between age and preferred associations is much higher in normal than in abnormal children, but is almost the same in both groups if the children are compared according to mental age. The percentage of preferred reactions to nouns does not differ much in the two groups. The abnormal show preference for numerals because of the mechanical association; while the normal show a strong preference for adjectives, adverbs and pronouns. The associations of the abnormal are usually pure assonance, repetition, external, mechanical, and egocentric. The associations of the normal are unique, original, intrinsic, significant, and intelligent. The reaction time is of no importance in this diagnosis, as automatic or mechanical associations are quicker than intelligent responses.—R. Schwarz (George Washington University).

487. **Busemann, A.** *Die Erregungsphasen der Jugend*. (The excitation phases of youth.) *Zsch. f. Kinderforsch.*, 1927, 33, 115-137.—The author takes as his text the thesis of Siegert (*Die Periodizität in der Entwicklung der Kindes-natur*, 1891) that children develop not according to a smooth upward curve of physical and mental progress, but rather by an irregular course of "favorable and unfavorable phases," so that the impression of periodicity is given. In a careful review of recent European work, including a few of the older studies in English, the author finds striking evidence of critical phases in the development of children. Among the experimental studies reported are Busemann's own contributions in the field of early speech development and of moral judgments. The article serves as an historical background and field of enlargement to them. The critical phases or periods of excitation the writer places roughly at ages 3, 6, 9, 12 or 13, 16 or 17, and perhaps at 19 or 20. Findings of Ch. Bühler, E. Köhler, the Scupins, and Hetzer in their studies of children's speech are quoted in support of the view that a first emotional crisis occurs at the age of 3. The next crisis, placed at age 6, is determined by reason of the greater emotionality (at the expense of intellectuality) in speech and in interests at that age. The results of von Kuenberg and Leemann, obtained experimentally, indicate the first appearance at 6 of the naughtiness phase, which is to reappear again at 9, and at 12 or 13. The greater mortality of 6-year-olds may be in part caused by concomitants of the emotional crisis at this age. At 9 a striking increase occurs in the number of non-promotions in school, and bad behavior is prevalent (Haase). Pohlmann is quoted to the effect that the reaction time in word definition shows large increases at ages 9 and 13, and yet the resulting product is not more intelligent. As at ages 3 and 6, speech at 9 emphasizes action rather than reflection. Responses in intelligence tests are reported by a number of authors as showing irregularities in response at this period. Chatter and voluminous writing are also characteristic at 9 (Giese). Bernfeld found that eminent writers were more apt to date their earliest productions at 9-10, 12-13, and 16-18. Stammering is reported as more pronounced at 9-10 and 12-13 (Hall). Delinquency in Sweden appears to show the effect of the emotional phases. Ages 6, 9, 12 or 13, and 15 or 16 are the "wild" ones. The Alpines of south Germany appear to show the critical phases somewhat later (Gruhle), but the rhythm is similar. Prepuberty (at 12 or 13) is more outstanding in its emotional characteristics than any of the earlier crises (Ch. Bühler, Tumlitz, Busemann). The preadolescents are dissatisfied with themselves (Busemann), and their social adjustments in the school situation are unsatisfactory. The 12 or 13 year phase approaches the character of the (15 or 16 year) adolescent crisis. In both, but far stronger in the later period, is a tendency toward contradiction and opposition, toward gloom, toward religious conversion or interest, toward reflection on moral themes (Busemann, Ruland, Starbuck, Schaefer). Diaries flourish, with the girls in the

earlier period, with the boys in the later period. Eidetic phenomena find favorable ground during both crises (Zeman and Fischer-Hirschberg), and day-dreams are, of course, prevalent. Poetic expression is characteristic. Inhibitions that probably definitely interfere with the best exercise of intelligence appear at 12-13 (Pohlmann, etc.). The adolescent crises (ages 16-17) show emotional stress and intellectual inhibition. Fertility in speech is increased (Busemann and Goldbeck), but the adequate expression of intelligence is often temporarily handicapped (Bogen, etc.). The author finds some evidence of a last phase (last as far as childhood is concerned), at 19 or 20, showing similar emotional tendencies (Bernfeld, Starbuck, etc.). Busemann's speech studies, extending over the period from age 9 to age 17, show periodic rhythm in the type of development for all children and for both sexes, although there is some evidence that the sexes show slight differences as far as the exact placement of the critical ages is concerned. The Binet tests do not show the variations in response at the critical ages as do some other intelligence tests, probably, the author believes, because they are constructed in such a way as to take account of these variations in rate of psychological development (i.e., the "practical" tests appear at the "practical" ages, etc.). Work by the author has corroborated studies of Heywang to the effect that country children reach the successive excitation crises somewhat later than city children. This is in line with their generally retarded development. A theory of physiological and psychological phase and counter-phase is advanced in explanation of the developmental rhythm: the progress of development proceeds until in the emotional-subjective sphere a supernormal phase occurs. The passing of a certain high point in this sphere then releases or stimulates a compensatory development in the intentional-objective sphere. The apparent correlation between the appearance of the excitation phases and rapidity in anatomical growth lends evidence in favor of a structural basis for the observed behavior phenomena. A continuous trend in development is not denied. The excitation phases represent periodic deviations superimposed on the general curve of development. Implications for education are not to be overlooked.—*C. C. Miles* (Stanford).

488. **Castellano, M.** *Se esista una correlazione tra intelligenza, comportamento, e condotta morale.* (Whether a correlation exists between intelligence, behavior and moral conduct.) *Riv. psicol.*, 1927, **23**, 6-12.—A considerable number of normal and abnormal children were compared as to intelligence, character and behavior patterns. In general, greater intellectual deficiency was found to be concurrent with the more unfavorable character and conduct traits, with the possible exception of variations in sex.—*T. M. Abel* (Illinois).

489. **Cunningham, B. V.** *An experiment in measuring gross motor development of infants and young children.* *J. Educ. Psychol.*, 1927, **18**, 458-464.—An attempt is made to develop a test of motor coordination for very young children (12-36 months). Correlations are made with mental age computed from the Kuhlmann test (r at 12 months = .39), and with other anthropometric measures (weight divided by the length squared, and weight divided by stem). In the latter cases, there is a decreasing amount of correlation as age increases, for at 12 months the coefficients are definitely positive while at 36 months they are clearly negative. Reliability coefficients are also computed. The correlation of motor scores at 12 months with motor scores at 18 months is .58. There is, however, a definite correlation with M.A. at all ages, possibly due to the use of language in giving instructions. The tests themselves are listed and the median performances at six month intervals from 12 to 36 months are also given.—*A. M. Jordan* (North Carolina).

490. **Denisova, M. P., & Figurin, N. L.** [Periodic phenomena in the sleep of children.] *Novoe v refleksologii i fiziologii nervnoi sistemy* (Reflexological and

neurophysiological news), 1926, **2**, 338-345.—In connection with an investigation of the development of sleeping and waking in infants, the authors studied the breathing during sleep. By means of the Lehmann pneumograph, the curve of breathing was registered for some (3-5) hours, and at the same time all motor phenomena were precisely recorded. Thus it was determined that the breathing of infants during sleep is alternately accelerated and retarded with regular periodicity. Simultaneously with the acceleration, there begins also a deeper breathing. The periods of acceleration and retardation may alternate in perfect rhythm, the average duration of a cycle being about 50 minutes, but they vary with the individual and with age. Moreover, the period of accelerated breathing is accompanied by motor phenomena as follows: Movements of the eyelids and of the pupils under the lids begin invariably at this time. In the same period there occur often, but not always, general movements of the head and hands and turning of the body. Expressive movements and smiling (common in children during sleep) are also observed in the period of accelerated breathing. Urination also occurs only in this period. The authors found that the pulse was alternately accelerated and retarded, parallel with the breathing. It may be supposed that the described periodicity, being a peculiarity of infancy, results from an insufficient coordination of the work of the sympathetic and parasympathetic nervous systems.—*A. L. Shnirman* (Leningrad).

491. **Fambri, P.** *Sulle intuizioni immediate di massa nei fanciulli normali e anormali.* (On immediate intuition of mass among normal and abnormal children.) *Riv. psicol.*, 1927, **23**, 1-5.—The author reports a small study carried on to verify the presence of intuitiveness in childhood. Normal and subnormal children were asked to estimate roughly the volume of the space taken by holes they had punctured in the cardboard in a given interval of time. The exactness of their estimation, taken as a criterion of intuitive guessing, was found to be in inverse ratio to intellectual development. Normal children of six years were the most proficient, subnormals of ten years less so, and normals of ten years the least.—*T. M. Abel* (Illinois).

492. **Fischer, A.** *Religionspsychologie Untersuchungsmethoden im Dienst von Kinderforschung und Pädagogik.* (The methods of investigation of religious psychology in the service of child study and pedagogy.) *Zsch. f. päd. Psychol.*, 1927, **28**, 10-19; 74-80; 141-152.—The author first discusses the meaning and content of the psychology of religion and its relation to the history and philosophy of religion. The methods to be used must include a study of spontaneous expressions of religious experience and responses to inquiry. Experiments can be made only in a very limited sense. The religious behavior of individuals must be interpreted in the light of their historical and environmental background. On the other hand, the religious life of the individual, particularly of the religious genius, must be regarded as something more than the mere imitation or repetition of group behavior. Both folk psychology and child psychology demand that one penetrate beneath the external behavior to discover the experiences which are back of it. The chief method of study is systematic observation, by means of which the spontaneous religious expressions of the child are recorded. Interpretation must be carefully distinguished from observation, and observation must be extended to the sources of the child's experience. The second important method is systematic inquiry concerning specific forms of religious experience by means of oral or written questioning or by setting particular tasks, such as compositions. The last method is the analysis of documents, as drawings, diaries, and poems.—*F. N. Freeman* (Chicago).

493. **Gribedov, A. S.** [Difficult children and psychoanalysis.] *Voprosy izucheniya i vospitaniya lichnosti* (Problems in the study and education of personality), 1926, No. 1, 57-68.—The medico-legal and especially the medico-peda-

gogical examination of children who are mentally under-aged is aided greatly by psychoanalysis, which reveals to us the causes and the manner of perpetration of an offense. Psychoanalysis explains the origin and the mechanism of impulsiveness, which is one of the most frequent causes of pathological law-breaking. A report upon examination of a pathological offender without psychoanalysis is like the title of a book with unknown contents. The trouble is not explained by referring it to accidental occurrences; for in all the phenomena in the world, including human behavior, there is a strict conformity to law, and psychoanalysis is part of it. The author points out the significance of psychoanalysis in pedagogy, and the illumination of the unconscious region, and gives as an example a medico-pedagogical report upon a case of severe hysteria with degeneration, from the Institute for Child Study. In this case a fifteen-year-old girl, as a result of an Oedipus complex, had designs to murder her mother.—A. S. Gribedov (Leningrad).

494. Guillaume, P. *Les débuts de la phrase dans le langage de l'enfant.* (The beginnings of the phrase in the language of children.) *J. de Psychol.*, 1927, **24**, 26-77.—The history of languages does not go back to the stage of morphological differentiation which would act in determining genesis of grammatical instruments as shown by the observation of infants in the stages of language development. Analysis of graphic and vocal expression shows that the former does not correspond to the latter and does not reflect the foundations of linguistic organization. The beginnings of the phrase appear at about 18 months, in connection with the names of persons immediately present. Whatever pseudo-phrases are employed before this time can be analyzed as isolated vocal reactions to immediate situations.—C. M. Diserens (Cincinnati).

495. Guillaume, P. *Le développement du langage chez l'enfant.* (The development of language in the child.) *J. de Psychol.*, 1927, **24**, 203-229.—This is a study of the higher linguistic processes, intonation of phrase, construction, and flexions, which complete the psychological constitution of the phrase, treated in a preceding article. The rôle of questions in the evolution of forms of statement is stressed and tables showing the relative frequency with which certain verbs as well as conjugations are employed are given to illustrate the influence of regularity on linguistic acquisition. A certain parallelism between phylogeny and ontogeny seems plausible, but must not be pressed. The principal instrument in the individual's linguistic evolution is imitation, which produces varying phenomena of simplification or progressive complication along correct lines, according to the individual's capacities for reaction at any given stage.—C. M. Diserens (Cincinnati).

496. Piaget, J. *L'explication de l'ombre chez l'enfant.* (Children's explanations of shadows.) *J. de Psychol.*, 1927, **24**, 230-242.—Children pass through four stages of development in the explanation of shadows: in the first stage the shadow is conceived as a substance emanating from the object and partaking of the nature of night in general. In the second stage it is a substance emanating solely from the object. In the third stage, the shadow is a substance which flees from the light. Only in the fourth stage, at the age of nine or ten, does the correct explanation appear. Children's concepts of shadows illustrate a law according to which the physics of the child proceeds from a dynamic substantialism to static explanations. There is an analogy between infantile and primitive thinking, and these amply documented studies throw much light on the genesis of the logic of relations in general.—C. M. Diserens (Cincinnati).

497. Reimers, O. *Untersuchungen über die Entwicklung des Tonalitätsgefühls in Laufe der Schulzeit.* (Investigations of the development of the feeling for tonality in the course of the school life.) *Zsch. f. angew. psychol.*, 1927, **28**, 193-234.—A study of the development of feeling for tonality in the

course of the years 7 to 14. Ninety-six children, 12 in each group, were tested by the reproduction and recognition methods. Practically all of the children were found to have begun their growth in feeling for tonality in the elementary grades and gradually increased in this ability until at the age of 14 it was fully developed. A series of tables and charts shows the rate of progress.—A. T. Poffenberger (Columbia).

498. Stern, W. **Psychologisches und Jugendkundliches vom Ersten Internationalen Kongress für Sexualwissenschaft.** (Psychological and child study material from the First International Congress for Sexual Science.) *Zsch. f. päd. Psychol.*, 1927, 28, 96-104.—An account of the general trends of discussion at the congress, and a more detailed summary of some of the papers. The report is divided into four parts, headed respectively, (1) General, (2) On psychology, (3) On the psychology of childhood and youth, (4) On the pedagogy of sex, and (5) On youthful witnesses in law cases relating to immorality.—F. N. Freeman (Chicago).

499. Thiel, G. **Eine Untersuchung von Kinderzeichnungen taubstummer Schüler.** (An investigation of the drawings of deaf and dumb children.) *Zsch. f. Kinderforsch.*, 1927, 33, 138-176.—The investigator, a senior-master of the deaf and dumb in Trier, is concerned with the problem of mental development of children as expressed in their drawings. He compares their conceptual progress (from cluster of concrete ideas through observation to concept) with that of normal children, differentiating rates of progress of boys and girls. The analysis is based on 2000 original drawings of 111 boys and 90 girls, aged 7 to 15 inclusive, in the deaf and dumb institutions of three cities (Zurich, Mils, and Trier). Comparisons are made with the results for normal children of Kerschensteiner and Levinstein and with Lindner's results on normal and deaf children. Thiel finds that progress in drawing parallels intellectual development in deaf as in normal children, but that the rate of progress of the deaf children is slower. The deaf children were superior to the normal in perception and presentation of detail (illustrated by number of parts of the body presented in drawings of the human figure). Thiel holds that "knowledge and interest rather than observation" are fundamental to early drawings by all children, but that the deaf children sooner begin to observe with accuracy. Form is observed by the deaf at an earlier age and is rendered more accurately by them than by normal children, especially in drawings of animals. Deaf girls show less inclination to make spatial drawings and begin later to present space correctly. The drawings of the deaf girls were somewhat better than those of hearing girls, but they were far inferior to the work of the deaf boys. The deaf children showed the same stages of ability as hearing children in rendering spatial relations of various objects, but they had difficulty with temporal relationships. The deaf girls neglected the temporal aspect twice as often as the deaf boys. Normal children draw better from memory than from nature; deaf children appear to do both equally well. A high rating in drawing was found to indicate high general ability and in most cases the drawing rating afforded a basis for a correct estimate of the stage of mental development reached. (Sixteen tables give ratings on drawings that afford comparisons by age, sex, and stages of conceptual development in graphic expression; 26 illustrations.)—C. C. Miles (Stanford).

[See also abstracts 308, 321, 347, 414, 507.]

EDUCATIONAL PSYCHOLOGY

500. Banker, H. J. **The significance of teachers' marks.** *J. Educ. Res.*, 1927, 16, 159-171.—The grades for one semester in 5 small schools were rated on

a five per cent basis. The curve turns out to be a Pearson Type I curve, inasmuch as it shows skewness toward the higher grades. The degree of skewness is not highly significant, however. An analysis of the causes of the skewness is made and is found to be a function of the marking scale, of faulty grading, of selective elimination from advanced classes, and of student personality.—S. W. Fernberger (Pennsylvania).

501. Book, W. F. Results obtained in a special "How to study" course given to college students. *School & Soc.*, 1927, 26, 529-534.—H. L. Koch (Texas).

502. Boyer, P. A., & Broome, E. C. Report on use of diagnostic tests in fundamentals of arithmetic. *Bull., Div. Educ. Res., Board of Educ., Philadelphia*, 1927, No. 58, pp. 5. (Mimeographed report.)—The city standards for performance in the fundamental arithmetic skills are given and the point which present classes should reach by the end of the semester. The tests used are not named.—D. E. Johannsen (Clark).

503. Brace, D. K. The measurement of achievement in physical education. *Amer. Phys. Educ. Rev.*, 1927, 32, 563-568.—The author presents two steps as being necessary to the measurement of achievement in physical education. The first is the establishment of specific objectives to be achieved. Few courses of study state specifically what is good posture or what achievement in running, jumping, throwing, etc., should be for sixth or seventh grade pupils. These objectives must come from the pupils themselves; adults must not decide what children should be able to achieve. The second step relates to the tests and methods used. Good tests should show validity, reliability and objectivity. They should be objectively measured by units that are equal at all points on the scale and should have satisfactory norms. Since we do not know what pupils of different ages and sex may be expected to accomplish, it may be necessary to state objectives in general terms until we know how many times a child should chin himself or at what speed he should climb a rope at any given age.—R. Stone (Clark).

504. Carrothers, G. E. Health and physical efficiency of city teachers. *J. Educ. Res.*, 1927, 16, 184-197.—Report of a study made in Cleveland on 4,000 teachers. Women in every type of school have a greater number of days of disabling sickness than men; married women more than unmarried women; unmarried men more than married men. Such factors as size of classes, congested districts, experience and extra teaching, which have been believed to be of great importance, turn out to be relatively insignificant.—S. W. Fernberger (Pennsylvania).

505. Eurich, A. C. The relation of achievement between college fraternity and non-fraternity groups. *School & Soc.*, 1927, 26, 624-630.—The author concludes that there is no significant difference in the scholarship of fraternity and non-fraternity groups at the University of Maine. His data, however, indicate that the relative standing of the two groups varies with the subject matter studied, the division of the college considered, and the number of years of college attendance. It is also worthy of note that the fraternity-non-fraternity comparison yields different results, depending on whether degree-attaining or non-degree-attaining groups are considered.—H. L. Koch (Texas).

506. Henss, W. Das Problem der Zwei- und Mehrsprachigkeit und seine Bedeutung für den Unterricht und die Erziehung in deutschen Grenz- und Auslandschulen. (The problem of bi- and multilingualism and its significance for instruction and education in the German border and foreign schools.) *Zsch. f. päd. Psychol.*, 1927, 28, 393-414.—This is a preliminary report of an investigation of the effect of bilingualism on the mental development of children in Holland. The author reviews a number of studies which seem to give evidence of a

mutually inhibitory effect of the habits which belong to two or more languages. He cites, for example, the questionnaire study made upon adults in Switzerland by Epstein, and a group of studies of school children in Wales made by Saer, Smith and Hughes. His own study is distinctive in that he uses non-language tests to measure the effect of bilingualism on intelligence, and in that he traces the effect genetically. The results are not reported in this article.—*F. N. Freeman* (Chicago).

507. Isaacs, S. *The function of the school for the young child*. Cambridge, England: Malting House School, 1927. Pp. 18.—Observations, like Stern's, of the results of cultivating guilt mechanisms in the child are valueless either as genetic psychology or as foundation for educational theory; on the other hand, the uncriticized concept of "freedom" is naive and misleading. Children who have had the minimal pedagogic interference and repression nevertheless insist on fantasizing tyranny in the parent-figure, thus demonstrating the impossibility for the latter of maintaining a passive rôle; on the other hand, sharing the games in which the children gratify their unconscious wishes modifies the pressure of the super-ego and makes less difficult the child's adaptation to reality. In this adaptation, the aim of the parent-figure should be to throw his influence on the side of the appeal to objective reality, even where the reality to be considered is the wills of other persons; speech should be used rather to provoke to and integrate experience than to anticipate it (unless real danger threatens); the traditional subjects of the curriculum are to be regarded merely as convenient formulations of experience, and when treated as such are found to be eagerly learned and used by the children. In short, "as wide a range of real facts as possible should be brought within the child's experience, but . . . in an order fixed by the needs of the child's growth and power of assimilation, as a process of step-by-step psychological adjustment."—*R. R. Willoughby* (Clark).

508. Jaqua, E. J. *Culture and competence*. *School & Soc.*, 1927, 26, 631-639.—*H. L. Koch* (Texas).

509. Laird, D. A. *Project work in undergraduate experimental psychology*. *School & Soc.*, 1927, 26, 655.—*H. L. Koch* (Texas).

510. Lemon, A. C. *An experimental study of guidance and placement of freshmen in the lowest decile of the Iowa qualifying examination, 1925*. *Univ. Iowa Stud.: Stud. Educ.*, 1927, 3, No. 8. Pp. 135.—12% of the students in the lowest decile groups at the University of Iowa over a five-year period received degrees under the usual conditions; 57% were eliminated by the end of the first year and 72% by the end of the second year. An experimental study with matched experimental and control groups from the lowest decile in 1925 was carried on "to determine if improvement could be made in the mental-educationally deficient college student as a result of an intensive study of individual differences with definite remedial treatment prescribed; to endeavor to discover ways of overcoming deficiencies and means of adjusting the student to the college situation; to give guidance and placement into proper educational levels; to devise a proper organization and courses of study to fit the needs of the group; and to set up a plan for an adequate educational personnel service." One of the most fundamental factors in maladjustment was the lack of silent reading ability. The remedial treatment consisted of general adjustment to the university situation, improvement of health, establishment of efficient habits, and instruction, exercises and drills in methods of study and reading. Fifteen more students from the experimental group than from the control group remained in the university for the second semester, and the grade point average was higher for the experimental group.—*B. Wellman* (Iowa).

511. Lemon, A. C. *The leave of absence in universities and colleges*. *J. Educ. Res.*, 1927, 16, 210-212.—Results of a questionnaire, answered by 61 insti-

tutions, indicates the varying usage with regard to leaves of absence.—*S. W. Fernberger* (Pennsylvania).

512. **McCall, W. A.** *What's the matter with psychology and measurement?* *J. Educ. Psychol.*, 1927, 16, 179-183.—A great deal of the difficulty with the application of psychology and measurement for education has been the difficult and multiple terminology of psychology. This is especially true in the problem of motivation, which is of great interest to education.—*S. W. Fernberger* (Pennsylvania).

513. **Odell, C. W.** *Are college students a select group?* *Univ. Ill. Bull.*, 1927, 24, No. 34. Pp. 45.—The problem of the bulletin is to discover whether and to what extent college freshmen constitute a select group as compared to all high school graduates. The investigation was carried on in Illinois on some 12,000 high school seniors, about 2,000 of whom entered college. Their high school records, I. Q.'s, ages, and freshman records are correlated. It appears that there is a small but reliable difference in the ability of high school seniors who do and who do not plan to enter college, and a decidedly greater difference between high school students in general and those who actually do enter. During the freshman year there is still a small amount of selection, leaving the students remaining slightly superior to those entering. The students entering large universities and technical schools are well above the average, while those entering teachers' colleges and professional, art, and music schools are decidedly below average. Those entering liberal arts colleges and small universities have approximately the same ability as the whole group.—*D. E. Johannsen* (Clark).

514. **Ohmann, O. A.** *A study of the causes of scholastic deficiencies in engineering by the individual case method.* *Univ. Iowa Stud.: Stud. Educ.*, 1927, 3, No. 7. Pp. 58.—The individual case method was used in the study of 128 cases of scholastically deficient students in the College of Engineering of the State University of Iowa. In conjunction with a diagnostic interview, tests of motor and mental ability, general and special educational preparation, emotional factors, interests, and work habits and study methods were given. The major groups of causes of scholastic deficiency were found to appear in the following order of significance: motivation and interests, intellectual factors, emotional factors, educational factors, environmental factors, study habits and methods, physical factors, teaching methods and content, and motor factors. The nature and effectiveness of remedial work varied with different types of cases and for different causes operating in any particular case. The monograph includes suggestions for improvement in the technique of the interview.—*B. Wellman* (Iowa).

515. **Reikel, A.** *Probleme der pädagogischen Psychologie. Eine Untersuchung über den gegenwärtigen Stand und die künftigen Möglichkeiten.* (Problems in educational psychology. An investigation of the present status and future possibilities.) Munich: Verlag Süddeutsche Lehrerbücherei, 1927. Pp. 31. 1 M.—*W. S. Hunter* (Clark).

516. **Ryan, H. H., & Crecelius, P.** *Ability grouping in the junior high school.* New York: Harcourt, 1927. Pp. xiii + 223. \$1.75.—The grouping plan developed by the authors in the Blewett Intermediate School, St. Louis, is distinctive in that intelligence as shown by test rating is not regarded as synonymous with ability to cope with school tasks, although it may be the most important single one of the bases for classification. Other bases are chronological age, pedagogical age, anatomical age (most easily determined by dentition), social age, height, weight, general condition of health, and rank in class. The significance of each of these ages, and the method of estimating it is discussed. The mechanical features of the system are explained and suggestions offered for adaptation to larger or smaller schools. The division results in the following

groups: "A," to cover the course in two years; "B," two and one-half years; "C" (with the lower sections segregated as to sex), three years; "Rapid Promotion," to take care of temporary misfits; and "Adjustment" for those of IQ 80 or lower. The superior pupils are given an enriched program; acceleration and enrichment are not mutually exclusive practices. A collection of current definitions of intelligence is given.—*M. P. Montgomery* (Minnesota).

517. **Symonds, P. M.** *The supervisor of study in the high school.* *School & Soc.*, 1927, 26, 509-513.—*H. L. Koch* (Texas).

518. **Taylor, H. R.** *The need for personnel research in a university.* *School & Soc.*, 1927, 26, 653-655.—*H. L. Koch* (Texas).

519. **Thompson, H.** *An experimental study of the beginning reading of deaf-mutes.* *Teach. Coll. Contrib. Educ.*, No. 254.—A study to answer the question, "Will not the attempt to increase the deaf-mute's language facility by an educational procedure which recognizes the laws of learning, concept formation, and other principles of psychology, throw some light on the learning process of normal children?" A brief summary of the physical and mental make-up of deaf-mutes is followed by a description of the five methods of education in current use, after which a controlled experiment on ten deaf-mute children (average chronological age 6 years, 6 months) is described. The experiment used pictorial material and was designed to increase silent reading ability. An hour's instruction taken from the regular school work each day from October to June led to an increase of five-sixths of the reading achievement of normal hearing children, and two and one-half times as much as the control group learning under the oral system, with very little or no loss in other abilities taught, such as speech, lip-reading, and writing. Better attitudes of self-reliance and persistent work were obtained for the experimental group than for the control. The vocabulary and illustrations of some of the reading materials used are appended.—*H. H. Remmers* (Purdue).

520. **Unzicker, S. P.** *Withdrawals from junior high school.* *J. Educ. Res.*, 1927, 16, 198-202.—One-fourth of the pupils who enter junior high school do not stay to finish the course. More boys withdraw than girls. Those with the lowest degree of intelligence, as measured by intelligence quotients, tend most strongly to withdraw.—*S. W. Fernberger* (Pennsylvania).

521. **Washburne, C., Vogel, M., & Gray, W. S.** *A survey of the Winnetka public schools.* Bloomington, Ill.: Public School Publishing Co., 1926.—Comparisons were made with a near-by private school, a public school of similar location and a university elementary school, which it was believed were typical of American schools. Although the Winnetka pupils were not above this group in intelligence, they were found to do significantly better work in high school when compared with freshmen from other schools not in this group; they also do superior work while in elementary school, and have less retardation. The teachers do slightly more work than the average under typical class instruction.—*R. R. Wiloughby* (Clark).

522. **Washburne, J. N.** *An experimental study of various graphic, tabular, and textual methods of presenting quantitative material.* *J. Educ. Psychol.*, 1927, 18, 465-476.—Further consideration of the various graphic, tabular, and textual methods of presenting material introduced in the previous issue of this journal (see Abstract 258) is given. Matters such as the relation between the simplicity of the visual pattern and the specificity of the impression upon the observer, the significance of the number and arrangement of items, and the relative potency of logical and visual factors are discussed. The conclusions are very significant. If the visual pattern is more simple, and the data few, the recall is more specific; but if the visual pattern is more complex and the data more numerous then the recall is more general. Round numbers are more favorable

to the recall of specific amounts. The paragraph is the worst instrument for setting forth quantitative data. For recall of relative amounts use the bar graph; for dynamic comparisons use the line graph; for specific amounts use the table.—*A. M. Jordan* (North Carolina).

523. **Watson, G. B.** *A comparison of two types of illustration for teaching educational psychology.* *J. Educ. Psychol.*, 1927, **18**, 433-444.—By the use of two different methods Thorndike's laws of learning were taught to two groups differing both in maturity and in intelligence. The methods differed in that the illustrations, in the one instance, were taken almost altogether from non-human experiments while, in the other, they were taken from actual human experiences, particularly from those experiences occurring within the school. The rotation type of experiment was followed. The results were appraised by the ability of the subjects (1) to state the law, (2) to illustrate the law, (3) to illustrate the law in an original manner, (4) to mention the law in explaining the problems raised, and (5) to estimate a situation. The results were almost unanimously negative. The subjects after rigorous teaching for a week were unable to analyze a teaching situation more efficiently than before, and one type of illustration was no better than the other. There was some indication that the less intelligent student profited more from the schoolroom illustrations.—*A. M. Jordan* (North Carolina).

524. **Yepsen, L. N.** *The reliability of self-scored measures.* *School & Soc.*, 1927, **28**, 657-660.—Having given an intelligence test to 51 women and 2 men who were taking a course in educational measurements (ages 18-55, teaching experience 0-20 years) and having, unsuspected by the class, obtained the scores, the author returned the tests to the class members. About 1 out of every 4 students took the opportunity, when allowed to correct his own paper, of supplying missing or correcting wrong answers and thus of misrepresenting his standing on the examination.—*H. L. Koch* (Texas).

[See also abstracts 284, 319, 450, 482, 492, 528, 529, 530, 531, 536.]

BIOMETRY AND STATISTICS

525. **Betz, W.** *Über Korrelation.* (On correlation.) *Zsch. f. angew. Psychol.*, Beiheft 3. (2d ed.) 1927. Pp. 65. Rmk. 3.60.—This work, the first edition of which was published in 1911, gives directions for the calculation of correlations and a critical review of the newest methods, together with a bibliography of the more important publications (139 titles). It is the only guide which has yet appeared in the German language.—*W. Betz* (Leipzig).

526. **Burgess, R. W.** *Introduction to the mathematics of statistics.* Boston: Houghton Mifflin, 1927. Pp. ix + 304. \$2.50.—The author presents a brief general treatment of the methods of statistical analysis, presupposing on the part of the reader only such a knowledge of mathematics as is gained in the secondary school. A bibliography lists journals, sources for current statistical data, and books on related mathematical topics, general theory of statistics, graphical methods, statistics of the various special fields, and statistical and mathematical tables. The appendices present tables of the decimal values of common fractions, of the "denominators of a and b , coefficients of parabolic regression formula as applied to historical series," and of the ordinates and areas of certain theoretical frequency curves.—*L. M. Harden* (Clark).

527. **Thurstone, L. L.** *A law of comparative judgment.* *Psychol. Rev.*, 1927, **34**, 273-286.—A new psychological law, called the law of comparative judgment, is presented with some of its special applications in the measurement of psychological values. This law is applicable not only to the comparison of

physical stimulus intensities but also to qualitative comparative judgments, such as those of excellence of specimens in an educational scale. It should be possible also to verify it on comparative judgments which involve simultaneous and successive contrast. The law is stated as follows:

$$S_1 - S_2 - x_{12} \cdot \sqrt{\sigma_1^2 + \sigma_2^2 - 2r\sigma_1\sigma_2} = 0$$

in which S_1 and S_2 are the psychological scale values of the two compared stimuli; x_{12} is the sigma value corresponding to the proportion of judgments $p_1 > p_2$, σ_1 is the discriimal dispersion of stimulus R_1 , and σ_2 is the dispersion of stimulus R_2 . r is the correlation between the discriimal deviations of R_1 and R_2 in the same judgment. This law is basic for work on Weber's and Fechner's laws, applies to the judgments of a single observer who compares a series of stimuli by the method of paired comparisons when no "equal" judgments are allowed, and is a rational equation for the method of constant stimuli. The law is then applied to five cases each of which involves different assumptions and different degrees of simplification of the law for practical use. The weighting of the observation equations is discussed because the observation equations obtained with the five cases are not of the same reliability and hence should not be equally weighted.—H. Helson (Kansas).

[See also abstract 369.]

MENTAL TESTS

528. Boyer, P. A., & Broome, E. C. Report on reading tests. *Bull. Div. Educ. Res., Board of Educ., Philadelphia*, 1927, No. 59. Pp. 16. (Mimeo-graphed report.)—The report of a voluntary testing program in the city of Philadelphia. Three tests were used, Philadelphia Silent Reading Test, Form A, Stanford Achievement Reading Test, (Paragraph Meaning, Form A), and the Thorndike-McCall Reading Scale, Form 1. The medians for the city and for each district and school for grades 2 to 9B are given and compared with the standard for each grade. On the basis of these findings certain recommendations are made concerning the teaching objectives for the semester.—D. E. Johannsen (Clark).

529. Boyer, P. A., & Broome, E. C. Report on handwriting test. *Bull. Div. Educ. Res., Board of Educ., Philadelphia*, 1927, No. 60. Pp. 4. (Mimeo-graphed report.)—The bulletin reports the results of a voluntary testing program and indicates the necessity for special types of drill for pupils showing peculiar need. Tables are given showing the results by grades and districts. The standard of achievement is in terms of the Zaner Scale.—D. E. Johannsen (Clark).

530. Boyer, P. A., & Broome, E. C. Report on spelling test. *Bull. Div. Educ. Res., Board of Educ., Philadelphia*, 1927, No. 61. Pp. 6. (Mimeo-graphed report.)—The bulletin is a report of a voluntary testing program; the spelling test used was composed of words so selected as to meet the following requirements: (1) presence in the Philadelphia course of study for preceding grade section; (2) presence in Iowa Spelling Scales at a step of spelling efficiency approximately 50%. The tests were given to 97,605 children in elementary and junior high schools. The achievement indices for May and for September are given for comparison, and the medians of the city as a whole, the districts, and the schools.—D. E. Johannsen (Clark).

531. Gitting, I. E. Correlation of mental and physical traits in University of Arizona freshman women. *Amer. Phys. Educ. Rev.*, 1927, 32, 569-583.—These studies were made on 75 first year college women at the University of Arizona. The object was to study the relations of physical development and mental

traits. The following measurements were taken: age, weight, height, lung capacity, poise grade, mental scores, and scholarship scores. Each trait was correlated with every other trait making twenty-one interrelations as follows:

	Weight	Height	Lung Cap.	Mental Score	Scholarship	Poise
Age	.104	-.249	-.277	.165	-.058	.141
Weight		.444	.649	.193	.338	.061
Height			.434	.180	.061	-.109
Lung Cap.				.183	-.031	-.100
Mental Score					.82	.236
Scholarship						.139

The author concludes that: a small correlation exists between weight and mental qualities; a slight correlation is found between good posture and mental ability; a still smaller relation exists between weight and lung capacity, but between none of the other physical traits. There is a high correlation between intelligence as measured by Army Alpha and scholarship as measured by grades.—R. Stone (Clark).

532. **Jones, V. A. A study of the non-verbal nature and validity of Myers Mental Measure.** *J. Educ. Res.*, 1927, 16, 203-209.—Records were taken from 327 children from homes of non-English-speaking immigrants and 278 children of native American parentage. The scores of the Myers Mental Measure and the McCall Multi-Mental Test were compared. Although the Myers Mental Measure is a non-verbal test there is no significant difference between the scores for the immigrant and the native American group as compared with the highly verbal McCall Test. The Myers test correlated with the McCall Test with a value of .46.—S. W. Fernberger (Pennsylvania).

533. **Kelley, T. L. Interpretation of educational measurements.** Yonkers: World Book Co., 1927. Pp. 353. \$2.20.—Among the outstanding contributions of the book are (1) the judgments of the relative excellence of assorted tests in some 70 fields of accomplishment, by Kelley, Franzen, Freeman, McCall, Otis, Trabue and Van Wagenen; (2) detailed and exact information on the statistical and other characteristics of the same tests, based on a questionnaire addressed to the text authors or (in the absence of reply) estimates by Kelley on the best data available; (3) a chapter of 47 pages condensing all the principal elementary statistical methods. In addition, there is constant emphasis upon the importance of the probable error, with some illustrative applications; for example, it is maintained that about 90% of the abilities measured by our best "intelligence" and "achievement" tests are (due chiefly to the size of the probable errors) the same ability. A chapter sets forth the analytical procedures which lead to this conclusion and to four others earlier enunciated. "Idiosyncrasy," or inequality among abilities, which the author regards as highly valuable, is considered in two chapters; the remainder of the volume is devoted to a historical sketch of the mental test movement and a statement of the purposes of tests, the latter being illustrated by appropriate chapters.—R. R. Willoughby (Clark).

534. **Matthews, C. O. The effect of printed response words upon children's answers to questions in two-response types of tests.** *J. Educ. Psychol.*, 1927, 18, 445-457.—In a previous study in which attempts were made to obtain indications of the preferences of children for numerous samples of reading and graphic materials, one form of a test was printed like the others in every respect save one. Instead of (more), the answers were printed (less). On tabulating these results it was found that there were large differences due merely to the fact that

one of the answers was above the other. In general, it was found that when other things were equal, 33.8% were more often checked when "more" appeared above "less" than *vice versa*. Experiments with the yes-no, no-yes arrangement showed that on the average a given answer was marked 3.2% more often when it was printed to the left of its alternative.—*A. M. Jordan* (North Carolina).

535. **May, M. A., Hartshorne, H., & Welty, R. E.** Personality and character tests. *Psychol. Bull.*, 1927, 24, 418-435.—A review of 150 titles, bearing upon many different aspects of this complex field: tests and laboratory technique for measuring certain personality traits; for measuring emotions and emotionality; for detecting moods, interests, preferences, etc.; for measuring social-ethical judgments; rating methods; etc. The reader gets the impression that active investigative interest is being manifested along very many different lines, all bearing directly or indirectly upon the ideal of establishing methods of reliable examination in character and personality.—*J. F. Dashiell* (North Carolina).

536. **Otis, A. S., & Wood, B. D.** Columbia Research Bureau Algebra Test. Yonkers-on-Hudson: World Book, 1927. Pp. 12. \$1.30 per pkg. of 25 with accessories.—This is an algebra test for either a college entrance or a final examination. It consists of two parts, each requiring 50 minutes to administer, the first being a series of 20 equations, and the second 20 problems. It was standardized on 762 high school students and entering college freshmen. The reliability of the preliminary form was .86, and it is believed that the final form has a higher reliability than the first. The results show that problem solving should be more emphasized in teaching algebra.—*D. E. Johannsen* (Clark).

[See also abstracts 371, 455, 482, 486, 502, 503, 510, 524.]

